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IDENTIFIERS *United States (Northwest)

ABSTRACT

Designed for progressive implementation (1966-1977) in the Northwest Region, this program guide emphasizes rural educational change via training systems and materials which suggest and support new structural patterns and participatory decision making for rural schools and communities. Divided into three major sections (Summary Information, Program Description, and Institutional Descriptions), the bulk of this guide describes the program as follows: (1) The Rural Education Problem (rural setting, present conditions, potential for rural education improvement, and critical rural education needs); (2) General Strategy (models for field-centered training, field-based product development, and an operational setting for product development); (3) Specific Strategies (the generic learning and change process model; strategies for school-centered, community-centered, learner-centered, and support agencies-centered rural futures development; and the strategy relationships); (4) Addendum (an optional family-centered strategy); (5) Dissemination Plan; (6) Evaluation Plan; (8) Bibliography. Major program components are identified as community, school, learning environment, and support agency components and include both activities and products. (JC)

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Rural Education Program

Basic Program Plans

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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April, 1972

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NORTHWEST REGIONAL EDUCATIONAL LABORATORY

RURAL EDUCATION PROGRAM

BASIC PROGRAM PLAN

RURAL FUTURES DEVELOPMENT STRATEGIES

APRIL 1, 1972

"We believe in the capacity of people to make their own decisions in their own lives in their own communities - and we believe in their right to make those decisions."

"We can no longer afford to approach the longer-range future haphazardly. As the pace of change accelerates, the process of change becomes more complex. Yet at the same time, an extraordinary array of tools and techniques has been developed by which it becomes increasingly possible to project future trends - and thus to make the kind of informed choices which are necessary if we are to establish mastery over the process of change."

Richard M. Nixon

RURAL EDUCATION PROGRAM

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PART ONE: SUMMARY INFORMATION

SUMMARY DATA SHEET

Institution code: R 4 6 N

Program code: R 3 6 N 4

Date prepared: April 1972

Name and location of Institution:

Director:

Northwest Regional Educational
Laboratory
500 Lindsay Bldg., 710 S.W. Second Ave.
Portland, Oregon 97204

Dr. Lawrence D. Fish

Title of Program:

Staff member in charge:

Rural Education

Mr. Rowan Stutz

Start and end dates of Program: 1965-1977

Costs:

	DRDR Basic contract	Other Federal	Non-Federal	Local contribution	Total
Investment thru 11/30/72	1,708,000		90,000		1,898,000
Projected costs thru 11/30/77	4,678,000		250,000		4,928,000
FY 1973 costs	822,000		50,000		872,000

PROGRAM REGISTER

Program code:

R	3	6	N	4
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Institution: Northwest Regional Educational Laboratory

Date prepared: April 1972

Program title: Rural Education

Code no.	Title of component or activity	Person in charge	Start and end date
4A0	Community Component	Mr. Stutz	1969-77
4A1	Community Action Team Support	Mr. Stutz	1972-77
4A2	Change Agent Support	Mr. Stutz	1969-77
4A3	Change Agent Training System	Mr. Stutz	1969-77
4E0	School Component	Mr. Stutz	1973-77
4B1	Institutional Inquiry Consultant Training System	Mr. Stutz	1973-77
4B2	Inquiry Team Support	Mr. Stutz	1973-76
4B3	Institutional Inquiry Support	Mr. Stutz	1973-77
4B4	Administrator Training System	Mr. Stutz	1974-77
4C0	Learning Environment Component	Mr. Stutz	1966-77
4C1	Model Curriculum Materials	Mr. Stutz	1966-77
4C2	Curriculum Development Guideline	Mr. Stutz	1972-76
4C3	Teacher Training System	Mr. Stutz	1972-76
4C4	Learning Management	Mr. Stutz	1973-77
4D0	Support Agency Component	Mr. Stutz	1973-76
4D1	Support Agency Field Consultant Training System	Mr. Stutz	1973-76
4D2	Field Consultant Manual	Mr. Stutz	1973-76

PROGRAM RESUME

Program code:

R	3	6	N	4
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Institution: Northwest Regional Educational
Laboratory

Date Prepared: April 1972

Program title: Rural Education

Begin and end dates of (proposed) Program: 1966-1977

Staff member in charge: Mr. Rowan Stutz

Resume:

Problem Area: Educational indices such as achievement rates and self-concept show rural children are seriously disadvantaged in their education. Products and procedures can be developed to make a significant positive impact on the quality of learning opportunities available to students who attend rural schools. Objective: The program objective is to enable people in rural areas to change both their school systems and their communities toward providing more appropriate and effective learning experiences for youth. Strategy: The program emphasizes the development of training systems for people who are to be involved in educational change and materials that suggest and support new structural patterns and participatory decision making for rural schools and communities. Two strategies are important to both development and dissemination: (1) clusters of small rural schools serve as experimental units and demonstration sites and (2) a network of site support centers provides support services to each cluster. A generic change model is utilized in designing components which focus on the community, school, learner environment and support agencies. Expected Outcomes: Improved learning opportunities for rural students will be achieved through the use of interrelated products for: (1) training and supporting community change agents, (2) training and supporting institutional inquiry consultants, (3) providing desirable and effective learning materials through illustrative prototype instructional systems and training in developing their own learning experiences and (4) training personnel from support agencies.

COMPONENT RESUME

Component code:

R	3	6	N	4	A
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Institution: Northwest Regional Educational
Laboratory

Date prepared: April 1972

Program title: Rural Education

Component title: Community Component

Begin and end dates of (proposed) Component: 1969-1977

Staff member in charge: Mr. Rowan Stutz

Resume:

Problem Area: Rural communities have lost the structures and processes that used to make them centers of self-determination and local control. They have been penetrated by agencies whose policies and operating procedures are determined outside the local community. To reverse this trend people in rural communities need to develop their skills in inquiry, problem solving and effective collaboration. Objective: The objective is to develop a community change process and prepare change agents to assist a community in implementing this process over an extended period of time. Strategy: The Laboratory will: (1) prepare trainers and develop a training system for training community change agents and (2) develop materials that can assist community action teams participate effectively in the problem solving process. Expected Outcomes: Trained change agents will be available to help communities organize, acquire skills and engage in systematic change processes. Support materials will facilitate effective participation of people from the community in identifying, analyzing and solving local problems.

COMPONENT RESUME

Component code:

R	3	6	N	4	B
---	---	---	---	---	---

Institution: Northwest Regional Educational Laboratory

Date prepared: April 1972

Program title: Rural Education

Component title: School Component

Begin and end dates of (proposed) Component: 1973-1977

Staff member in charge: Mr. Rowan Stutz

Resume:

Problem Area: One reason rural schools are less responsive and less adaptive to change is that teachers often are alienated from the community and lives of students. They also have little opportunity for professional growth. There is a need to form close working relationships among teachers, students and citizens. Objective: The objective is to prepare institutional inquiry consultants who have the capabilities to form and assist inschool inquiry teams. Strategy: The Laboratory will: (1) develop a training program for training educational consultants for helping rural schools become inquiring institutions, (2) design a clinical training center for rural administrators together with the materials and guidelines for the recruitment of candidates, organizing and operating an effective clinical training center, (3) develop guides for identifying school problems, assessing staff competence, gathering pertinent data and making decisions systematically and (4) develop guides for organizing inquiry teams and assigning appropriate decision making responsibility. Expected Outcomes: Educational consultants will be available to help rural school faculties organize for and become skilled in inquiry. Administrators will have access to clinical training centers. Appropriately organized inquiry teams involving citizens, students and educators will have access to guidelines for identifying school problems, assessing staff competencies, collecting data, making decisions, etc.

COMPONENT RESUME

Component code:

R	3	6	N	4	C
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Institution: Northwest Regional Educational Laboratory Date prepared: April 1972

Program title: Rural Education

Component title: Learning Environment Component

Begin and end dates of (proposed) Component: 1966-1977

Staff member in charge: Mr. Rowan Stutz

Resume:

Problem Area: The rural curriculum contains few electives or alternative schooling patterns. Instructional material is not relevant to rural resources or experiences of rural students. At the same time, special learning facilities, supplies and equipment are limited. Rural schools need to take advantage of their small size and provide learning experiences which utilize their environment and fill the particular needs and interests of their students. Objective: The objective is to assist rural schools provide an appropriate curriculum which is option-filled, self-enhancing and career oriented. Strategy: The Laboratory will: (1) design and develop specifications and production guidelines for appropriate rural curriculum, (2) engineer and produce prototypic curriculum materials that fit this design and specifications and (3) develop a system for training teachers to develop and utilize this type of curriculum materials. Expected Outcomes: The curriculum being designed will allow a student to pursue goals that are meaningful to him. These materials will be used in ways that encourage student decision making capabilities.

COMPONENT RESUME

Component code:

R	3	6	N	4	D
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Institution: Northwest Regional Educational
Laboratory

Date prepared: April 1972

Program title: Rural Education

Component title: Support Agencies Component

Begin and end dates of (proposed) Component: 1973-1976

Staff member in charge: Mr. Rowan Stutz

Resume:

Problem Area: The services which support agencies provided to rural schools tend to be inadequate and overly prescriptive. Teacher training institutions have not considered special rural needs and circumstances in designing programs. Assistance needs to be provided to these agencies to help them better meet rural needs. Objective: The objective is to prepare field service consultants from such support agencies as state departments of education and intermediate education districts to fill leadership and service functions which support improvement efforts by rural communities. Strategy: The Laboratory will: (1) develop a system for training personnel in support agencies to be effective consultants to inquiring rural school systems and (2) develop materials to support the work of these consultants in rural areas. Expected Outcomes: Personnel from state and intermediate agencies will develop appropriate consultant skills in such areas as systematic planning and problem solving. Their subsequent work with rural schools will encourage local initiative.

PART TWO: PROGRAM DESCRIPTION

OVERVIEW AND MATRIX

Following is a brief overview of the Northwest Regional Educational Laboratory's Rural Education Program proposal for improving rural education in America during the next five years. This proposed program is called: The Rural Futures Development (RFD) Strategies. The purpose of these strategies is to help rural citizens, educators and students more nearly realize the great potential that is theirs because of their humaneness, their unique rural resources and advanced knowledge and technology.

The problems related to rural education are difficult to characterize because of the diversity found in rural America. Rural poverty is not always the root of the problems, because rural areas are not uniformly backward and economically deprived. The problems cannot be related exclusively to racial and cultural differences, despite a significant rural population of Indians, Chicanos, Southern blacks and low-income Caucasians. Nor are the rural residents' ideologies, attitudes and orientations toward change and education uniformly different from the rest of society.

Given such diversity, how is one to characterize the rural environment and related problems? Furthermore, what are the characteristics of rural schools?

First, and perhaps most significantly, rural can be characterized by the setting in which it occurs, i.e., it takes place in villages, towns and surrounding countrysides which have small and/or dispersed populations, absence or deficiency of many public facilities and services, relatively weak governmental structures, a scarcity of local leadership and expertise, little local control over media and a

conservative attitude about change (President's National Advisory Commission on Rural Poverty, 1967).

Secondly, job opportunities in rural areas are, at best, scarce. While some persons are able to commute to nonrural jobs, many families have had to leave their rural residences to find employment. In addition, most graduates of rural schools must go elsewhere for education and job opportunities (President's National Advisory Commission on Rural Poverty, 1967).

A third major factor is that many of the major decisions which affect rural communities are made beyond the village or county boundaries by agencies whose policies and procedures are developed on a regional, state or national level, but whose programs have penetrated rural communities. Even when one or more local individuals control some of the power, change is slow to occur. The unusual overlap in life spaces within a small community generates pressure to remain within the economic and social norms created by everyone knowing everyone else. This too often results in acquiescence to the wishes of a few powerful persons (Hughes and Spence, 1971).

Thus, the problems of rural education derive their uniqueness from the characteristics of the environment in which it operates. Another set of characteristics, related specifically to education, clearly differentiate rural education from nonrural education.

- School enrollments are small
- Student backgrounds, interests and abilities are widely diverse
- Curriculum alternatives in the schools are limited
- Career development opportunities within the schools and communities are narrow

- The most readily available learning resources are related to agriculture, mining and lumbering and the out-of-doors
- The life-space of students, educators and citizens has considerable and frequent overlap
- The school system is limited in size of staff, support services, student enrollment and total budget, even though it is often large in geographical size
- The school system is a relatively insignificant and often ignored subsection of a much larger educational decision-making system that includes intermediate districts, state education agencies and the U. S. Office of Education
- Citizens, educators and students have little opportunity and few channels for influencing the schools' curriculum policies, instructional practices and operating procedures

Operating within these problems and limitations, and without adequate resources or training to capitalize upon the potential strengths of smallness, large numbers of rural students have received and are now receiving an ineffective and inappropriate education. Such a situation is generally viewed as reflecting the limitations inherent in a rural setting and one about which nothing can be done.

The Laboratory takes a different view, however, and believes that a rural renaissance, led by rural people, is imperative--and possible. Four sources were used to develop the Laboratory's vision of the potential for improvement in rural education: (1) Lessons from past attempts to reform rural education; (2) A perspective on human and institutional potential; (3) A set of values to which most Americans proclaim allegiance and commitment, called the tenets of democracy; and

(4) A sense of the present, derived from the psychology of human behavior and learning and made clearer by recent applications of social psychological research within industry. These four sources yielded a set of principles from which a general strategy and a generic learning and change process model were constructed.

The model was applied to three important components of the total rural education scene and descriptions were developed of (a) an ideal community participation environment, (b) an ideal school decision-making environment and (c) an ideal student learning environment. Because rural education operates as a subsystem of a much larger education system, the model also was applied to (d) on-site services of support agencies, such as state education agencies and intermediate districts, resulting in an explication of an ideal support agencies leadership and service environment. These descriptions of the ideal conditions for rural education are, briefly, as follows: (a) Rural communities: Channels and procedures are available to ensure that all citizens may participate in making the decisions that affect their lives; citizens have opportunities to acquire competence for effective involvement; (b) Rural Schools: educators are systematically involved with students and citizens in the processes of inquiry and self-renewal regarding the operations of the school as an institution; (c) Learning environments: practice is provided for decision making and decision execution in transactions with the real world; access is provided to resources which the students need for efficient acquiring of the information and competencies that will satisfy their decision-making and decision-executing requirements, thus gaining more opportunity to meet their

potential; and (d) External support services: representatives encourage and facilitate local initiative and participation in educational improvement.

When the current rural educational scene is viewed in light of these ideal conditions, it appears that there are a number of critical educational needs.

- Trained change agents to help communities organize, acquire skills and engage in systematic change processes
- Materials to help members of rural communities participate effectively in identifying, analyzing and solving local problems
- Search and information-linking strategies to help communities utilize knowledge and other resources
- Educational consultants to help rural schools organize and become skilled in inquiry
- Clinical centers to train rural schools administrators
- Models for organizing inquiry teams to appropriately involve citizens, students and educators
- Guidelines to identify school problems, assess staff competencies, design and complete data collection and make decisions
- Curriculum to allow students to pursue goals that are meaningful to them
- Instruction to encourage decision-making and decision-executing competence on the part of the learner and to facilitate learning
- Learning settings to facilitate movement and nurture diversity
- Training in skills for state agency and intermediate district personnel to help local district personnel

- Programs by support agencies to encourage local initiative

These needs revolve around the processes, structures and skills that allow rural people, young and old, to gain a greater measure of control over their lives and their educational institutions. The major concern, then, is to create in rural school systems and communities the capability for systematic change which provides rural students with more appropriate and effective learning experiences, so that they are able to gain control over their lives and their destiny.

To answer this major concern, the Northwest Regional Educational Laboratory proposes to initiate four closely related strategies: the Community-Centered Rural Futures Development Strategy; the School-Centered Rural Futures Development Strategy; the Learner-Centered Rural Futures Development Strategy; and the Support Agency-Centered Rural Futures Development Strategy. (A description of each strategy is presented in the body of this document.)

A central assumption in each strategy is that an individual's capacity to determine personal goals and capacity for achievement can be enhanced by schools and communities that are open, flexible and self-renewing. A second assumption is that the four environments--community, school, learning and support agencies--are overlapping and interdependent. Openness and freedom will not exist for students unless it also is valued for teachers; openness for teachers will not exist unless it is valued and practiced in the community and supported by state education agencies and intermediate districts.

Although the long-range objective is to improve learning opportunities for rural students by creating in rural school systems and communities the capability for systematic and educational change, the more immediate objective is to increase the capability of rural citizens,

educators and students to participate effectively in decisions that affect their learning and living. The general strategy is to develop products that will accomplish this objective. A number of specific outcomes for each of the four strategies are expected:

Outcomes from Community-Centered RFD Strategy

1. By 1976, at least twenty (20) change agents will have been trained by the Northwest Regional Educational Laboratory's personnel using the Laboratory's rural change agent training system. By 1976, the Laboratory also will have prepared seven (7) trainers who are not on NWREL staff.
2. Change agents who have completed the Laboratory's community-centered training system will exhibit a specific set of competencies for effective change agency.
3. By 1977, at least five (5) rural communities will have engaged trained change agents to help them develop patterns of involvement, utilize effective processes and acquire involvement skills for dealing with local educational improvement issues.
4. By 1977, five (5) change agents will have successfully used the Laboratory's community-centered products and gained the support of school administrators and school boards for the involvement of their communities in educational improvement efforts.

Outcomes from School-Centered RFD Strategy

1. By 1977, five (5) rural schools will be using the Laboratory's school-centered training materials, manuals and guides to create the conditions specified for an "inquiry school."
2. Rural school faculty members who have used the school-centered training system will manifest growth in the competencies specified for productive inquiry and "inquiry team" participation.
3. Rural school administrators who have completed the Laboratory's school-centered training system for administrators will work with faculty members, students and citizens to identify clusters of decisions that need to be made about their school's operations, organize and assign inquiry teams--composed of an appropriate mix of educators, students and citizens--to each of these decision clusters, and administratively facilitate the work of these inquiry teams in making decisions and affecting the execution of their decisions.

Outcomes from Learner-Centered RFD Strategy

1. By 1977, at least 60 percent of the schools and communities that have utilized either the Laboratory's school-centered strategy or community-centered strategy also will have elected to modify their curriculum and will be using the Laboratory's curriculum prototypes, criteria, catalogue of appropriate materials and search guidelines for developing and selecting curriculum materials that allow students to practice decision making and decision execution in real-life situations.

2. By 1977, at least 60 percent of the schools and communities that have utilized any of these RFD strategies will elect to implement the Laboratory's teacher training system as a means of providing competencies needed to engage students in life-relevant, want-satisfying learning tasks so that the tasks facilitate learnings important to responsible decision making and decision execution.
3. Teachers who have completed the Laboratory's learner-centered training system will exhibit the specified competencies that are needed to facilitate growth in learners toward decision-making and decision-executing competence.
4. Students who are engaged in ventures and carrier projects, as specified in the learner-centered curriculum, will grow in competencies to make and execute decisions affecting their lives and will acquire the familiarities with the phenomena of their environment that are instrumental to these competencies.

Outcomes from Support Agency-Centered RFD Strategy

1. By 1975, two (2) state education agencies and two (2) intermediate districts will elect to utilize the support agency-centered training system for staff members who work as field consultants to the rural school districts involved in any of the Laboratory's RFD strategies. By 1977, five (5) state agencies and five (5) intermediate districts will have used the training system.

2. State education agency and intermediate district personnel who have completed the Laboratory's learner-centered training system will exhibit growth in the competencies specified for field consultants to the rural school districts involved in the Laboratory's RFD strategies.

NORTHWEST REGIONAL EDUCATIONAL LABORATORY
RURAL EDUCATION PROGRAM - FUTURES DEVELOPMENT STRATEGIES
OVERVIEW MATRIX

TARGETS FOR INTERVENTION	EXISTING CONDITIONS THAT ARE CAUSING CONCERN	CONDITIONS THAT WOULD FAVOR LEARNING AND CHANGE
The participation environment of the community	1. Rural Communities are resistant to change 2. Have lost structures and processes that used to make them centers of self-determination and local control 3. Rural school system has limited tax base 4. High incidence of overlapping life space of residents 5. Rural communities have been penetrated by agencies whose policies and operating procedures are determined outside of the local community	1. Citizens engaged in systematic process of goal seeking, problem analysis and program implementation 2. Citizens organized to represent the concerns of and facilitate communication with every segment of the population 3. Citizens growing in skills of inquiry, productive group work and problem solving 4. Citizens utilizing the services of a change agent and the resources of other communities and agencies both within and outside of the community
The decision-making environment of the school staff	1. Rural schools are less responsive and less adaptive to change 2. Emphasis upon control and discipline, not learning 3. Teachers often alienated from community and lives of students 4. Little opportunity for professional growth 5. School isolated from community except for athletics 6. Little participatory decision making 7. Goals not clearly enunciated 8. Lack of systematic process or structure for dealing with pressures or recommendations for change	1. Inquiry teams made up of faculty members, students and citizens organized around classifications of continuing decisions 2. Faculty models decision-making and decision-execution behavior for students 3. School provides a social setting that incorporates the critical properties of the "real world" social phenomena 4. School as an institution nurtures diversity, humanness and in-life involvement 5. School faculties utilizing the services of institutional inquiry consultants.
The learning environment of the student	1. The rural curriculum contains few electives or alternative schooling patterns 2. Limited number of special learning spaces 3. Instructional material is not relevant to rural resources and in-life experiences of rural students 4. Limited supplies and instructional equipment 5. Few career development opportunities 6. Overemphasis on verbal learning 7. Small enrollment not used to advantage	1. Students engaged in productive tasks that are want-satisfying to the student and that carry significant learning 2. Unhampered movement of learners to specialized work stations, useful resources and into the real world outside the classroom 3. Resources of the rural environment are fully utilized and supplemented by technology and learning materials 4. Curriculum is life-involving by allowing students to engage in transactions with the real world 5. Teachers act in a "coaching" role to support practice, facilitate learning and reinforce decision-making behavior
The leadership and service environment of support agencies	1. Support agency services are inadequate and overly prescriptive 2. Teacher training institutions exercise monopolistic control of teachers' competencies and methods 3. Emphasis of state and regional leadership is often on regulation and inspection 4. Local initiative and competencies not encouraged	1. State and regional agencies support the concept of local control and encourage local participation in decisions affecting them 2. Support agencies provide help in identifying and analysing problems at local level 3. These agencies provide information regarding alternative solutions or optional programs, technical assistance in planning and programming and training resources for training local citizens and educators in needed new skills

CRITICAL NEEDS ARISING OUT OF THE DISCREPANCIES BETWEEN EXISTING CONDITIONS AND FAVORABLE CONDITIONS	NORTHWEST REGIONAL EDUCATIONAL LABORATORY'S RURAL EDUCATION PROGRAM'S FUTURES DEVELOPMENT STRATEGIES
Needed: 1. Trained change agents to help communities organize, acquire skills and engage in systematic change processes 2. Materials to help communities participate effectively in identifying, analyzing and solving local problems 3. Search and information-linking strategies to help communities utilize knowledge and other resources	1. Prepare trainers and develop a training system for community change agents 2. Develop materials that can assist community action teams participate effectively in the problem-solving process
Needed: 1. Educational consultants to help rural school faculties organize for and become skilled in inquiry 2. Clinical centers to train rural school administrators 3. Models for organizing inquiry teams to appropriately involve citizens, students and educators 4. Guidelines to identify school problems, assess staff competencies, design and complete data collection and make decisions	1. Develop a program to train educational consultants who can help rural schools become inquiring institutions 2. Prepare guidelines for the establishment and operation of clinical training centers for rural school administrators. Design a training program, and develop and/or locate and organize the training materials needed 3. Develop guides to identify school problems, assess staff competence, gather pertinent data and make systematic decisions 4. Develop guides for organizing inquiry teams and assigning appropriate decision-making responsibility
Needed: 1. Curriculum to allow students to pursue goals that are meaningful to them individually and in groups 2. Instruction to encourage decision-making and decision-executing competence on the part of learners and to facilitate instrumental learning 3. Learning settings to facilitate movement and nurture diversity	1. Design and develop specifications and production guidelines for a curriculum that embodies the psychological principles of the NWREL's learning and change process model 2. Engineer and produce prototypic curriculum materials (i.e. preventures, ventures, units) that fit the above design and specifications 3. Develop a program to train teachers in the most critical behaviors required by learners who are engaged in life-relevant learning tasks (viz. engaging students in goal-satisfying tasks, facilitating learning by eliciting perception-building responses, reinforcing responsible decision-making behavior, creating a productive working environment)
Needed: 1. Training in skills for state agency and intermediate district personnel to help local district personnel engage in systematic planning and problem solving 2. Programs that encourage local initiative	1. Develop a program to train state education agencies and intermediate district personnel to be effective consultants to inquiring rural school systems 2. Develop a handbook of materials to help in working with rural school districts

IONAL LABORATORY'S FUTURES DEVELOPMENT	OUTCOMES AND PERFORMANCE REQUIREMENTS
Develop a training system for to assist community action actively in the problem-	1. By 1976, the Laboratory will have trained seven (7) trainers and twenty (20) change agents who exhibit a specific set of competencies 2. By 1977, at least five (5) rural communities will have engaged trained change agents to help them develop patterns of involvement, utilize effective processes and acquire needed skills for dealing with local educational issues 3. By 1977, change agents will have successfully used NWREL's community-centered products in five (5) communities and gained the support of school administrators and local school boards in using their services and utilizing NWREL's strategies to involve citizens in educational decision making
in educational rural schools tions the establishment training centers rators. Design develop and/or training materials y school problems, gather pertinent data tions izing inquiry teams and ision-making responsibility	1. By 1977, at least five (5) rural schools will be using NWREL's school-centered products to create an "inquiry school" 2. Faculty members who have participated in the NWREL's school-centered training program and are using the related guides will manifest expected growth in the competencies specified for productive inquiry and "inquiry team" participation 3. Rural school administrators who have been trained in administering an "inquiry school" will work with their staff members, citizens and students to identify clusters of school problems, organize and assign inquiry teams to each cluster of decisions and facilitate the work of these teams 4. By 1977, at least twenty (20) institutional consultants will have availed themselves of the "inquiry" training prepared by NWREL.
ications and production m that embodies the of the NWREL's learning otypic curriculum materials (es, units) that fit the ations a teachers in the most ed by learners who ent learning tasks (viz. -satisfying tasks, eliciting perception- forcing responsible creating a productive	1. By 1977, 60 percent of the rural schools and communities that utilize NWREL's rural development products also will elect to use the Laboratory's curriculum development and teacher training products 2. Teachers who have been trained in the Laboratory's teacher training system will exhibit the competencies specified for engaging students in learning experiences that build competencies for making and executing in-life decisions 3. Students who are engaged in ventures and carrier projects will grow in competence to make and execute decisions
in state education agencies personnel to be inquiring rural school aterials to help in districts	1. By 1977, five (5) state agencies and five (5) intermediate districts will have elected to utilize the NWREL's support agency program to train all personnel who work with the rural school districts that are involved in using the Laboratory's other strategies

I. THE RURAL EDUCATION PROBLEM

Introduction

Rural youth are not receiving the education required for their full participation in the society of today and tomorrow, despite the current national commitment to supply quality education for all.

Educational deficiencies in rural areas are of national concern for two major reasons: the deficiencies create an impact far beyond the boundaries in which they occur and they handicap a sizable proportion of the nation's population.

Many rural residents find their educational background insufficient to secure adequate employment, especially as the economic structure of most areas becomes less centered on agriculture and its related services, and more diversified. Consequently, they become dissatisfied with their lives and the potential for a rewarding life within the rural scene.

Recent decades have seen large migrations of rural residents to urban centers. Many times they discover they are inadequately educated or unprepared to compete for existing jobs. Thus, an increased urban unemployment rate, and its related economic, social and cultural problems, leaves the former rural resident with the same problem in an alien environment.

Many of the basic deficiencies in rural education stem from the serious problems associated with personal poverty, community isolation, limited public services, lack of leadership and the concomitant of these problems--insufficient taxable resources to support services and programs which are available elsewhere in the nation. The rural areas'

natural assets--small size, close personal relationships, the traditional friendly and cooperative attitude of rural people and opportunities for grass roots involvement--have been insufficiently capitalized upon to offset deficiencies in rural life and education.

Rural schools do not readily adjust educational objectives or methods in the light of new information and needs. Traditional college preparation courses are emphasized, even though comparatively few students attend liberal arts colleges. Information is transmitted in the traditional teacher-talk verbal patterns. Curriculum emphasis on symbolic knowledge, rather than the real world of people and things, results in experiences which most rural students regard as irrelevant, obsolete and ineffective. Thus, as many as 85 percent of rural students do not find rural education pertinent to their needs and, consequently, do not succeed in the school environment (Northwest Regional Educational Laboratory, 1971).

Such statistics emphasize the need for rural schools to change: to increase the range of curriculum alternatives; to provide opportunities for students to pursue personally relevant goals; to establish an open, flexible and inquiring learning environment within which each student can learn to become a self-directing, competent decision maker.

If rural schools are to change significantly and to overcome their traditional resistance to change, rural communities must become involved, problem-solving communities. If, in fact, "schools are of their communities," then flexible, open, inquiring schools require flexible, open, inquiring communities.

The Northwest Regional Educational Laboratory, through its Rural Education Program, proposes to encourage and support the development of

the processes, skills and structures required for change in rural communities and their schools--the first priority need of rural education. This will require the development of materials that will enable and stimulate communities and schools to work together in creating environments for citizens, students and educators which are self-renewing, open, inquiring, learning and involving. The strategies which are proposed to implement these changes are based upon a critical review of past efforts, a thorough analysis of research related to learning and change, a perspective on human and institutional potential and an examination of American values.

Following is a description of the rural setting, an analysis of existing conditions affecting rural education and a construct of the potential that is possible for rural education improvement. Subsequent sections of this document contain the strategies proposed to move rural education from where it is toward where it has the potential to be. A work plan for carrying out these strategies and plans for evaluation and dissemination of the products of these strategies are also included.

The Rural Setting

More than one of every four Americans--26.5 percent or 54 million--lived in rural areas in 1970 (Bureau of Census, 1971). This reason alone warrants national concern for educational deficiencies in rural areas.

However, rural students are rarely perceived as comprising a significant target for improvement efforts. Some even proclaim that a rural education problem just does not exist. Denial of the problem is partly the result of consolidation and the decline in farm population,

which have eliminated the one-room school and made high school education available. Despite the well publicized decline in population, recent statistics show that rural America should not--and literally cannot--be ignored.

How large is rural America?

Although declining, its total population still exceeds the combined population of America's 100 largest cities. It is large enough so that rural America may be classified as the world's ninth largest country (only China, India, U.S.S.R., U.S., Japan, Indonesia, Pakistan and Brazil have total populations that exceed the rural population of the U.S.). No country in Europe, and only one in Latin America (Brazil) has a total population that exceeds the size of America's rural population (Swanson, 1970).

How dispersed is the rural population?

The accepted minimum measurement of an urban environment is a population density of 1,000 or more per square mile. The measure of suburbanization is a population of 500 per square mile. Approximately one-third of the states, 17, to be exact, do not contain a single county with a population density of 500 persons per square mile. Twenty-three states have a population density of less than 50 persons per square mile, and 37 states have a density of less than 100 persons per square mile (Swanson, 1970).

What is the meaning of, and, significance of "rural"?

Rural, furthermore, means an important segment of our nations' population--one third. It is a segment that is not decreasing in proportionate size, despite the alleged urbanization of our society. It is a segment that tends to be overlooked in these times of pre-occupation with urban crises.

Although solving urban problems in our country should have top priority, the severity and magnitude of similar problems in the development of human resource and in the provision of basic services and facilities are no less important in rural areas. The importance is for rural living itself, not just because rural areas contribute so many undereducated, unskilled migrants to urban areas.

Rural means people. It includes farmers, but it also includes men and women following every occupation known who choose to live beyond city limits in housing subdivisions, in towns and in the open country. It means people with a strong desire for privacy, living space and self-reliance. It means people with a pride in home and family. It means people looking for opportunity who have left the country for the city. Rural means America, our history and much of our dreams.

Thus, the rural distinction is important because it represents so much of what America has been as well as what it hopes to be. Rural means life at a scale that is comprehensive to the individual. It is important that we preserve and strengthen this option (Swanson, 1970).

Students in rural schools have many similarities to their urban counterparts, but they also maintain important differences. Kulvesky suggests that rural and urban youth alike tend to be imbued with the success ethic. Generally, they want more than their parents in social rank, material possessions and life chances. They usually want to abandon the rural scene and take up residence in the cities to seek higher status jobs than those held by their parents. To make these gains, they realize that high school education and, perhaps, additional education are imperative (Kulvesky, 1972).

The student population in most rural schools is more heterogeneous in background, attitude, values and aspiration levels than urban students. Sitting next to each other in a classroom may be the sons of both wealthy farmers and the day laborers they employ. Cultural and social differences are added to the economic ones when a mixture of races is present. Rural students have been traditionally more socially and politically conservative, although this distinction is lessening. They also have more often chosen vocational training for any post-high school work.

While rural youth spend less time in school--legitimately or otherwise--and drop out of school more often than urban students, they

also spend more time in working at jobs during the regular academic year and vacation time. According to Polk (1965), rural teenagers are more often charged with committing acts of "general misconduct" than with "serious offenses." Nonetheless, they run a greater risk of being subjected to adult jurisprudential treatment and going to jail with adult criminals. They tend to compare less favorably than urban students on characteristics such as self-image, self-assurance, self-adjustment, personality adjustment and level of anxiety. Burchinal (1965) argues that the greatest problem faced by rural youth as they seek their primary goals is attributable to their circumstances of disadvantage and the resulting dislocations in terms of personality, social relations and underdeveloped abilities. The environment of the rural school and community is seen as too stringent, too structured and too narrowly focused to allow a widely diverse student body to develop its broad range of individual talents, abilities and aspirations.

The Present Conditions

Since rural students frequently depend upon those educational opportunities available to them in local schools for their total exposure to formal learning, it is doubly important to make this experience effective and appropriate. The potential strengths and advantages of the rural environment must be capitalized upon if the school systems hope to turn limitations to assets. Small schools, sparse density and remoteness from urban pressures must be valued, not vilified, for rural education can incubate clarity, perspective and humane concern.

Institutional inertia has persisted, however, and resistance to change continues as a pervading characteristic of the American

educational system, not alone in rural schools. A study by the Stanford Research Institute states, "One of the most critical problems which confronts the field of education today is that of translating research results into practice" (Chorness, Rittenhouse and Herald, 1969). Despite recent infusions of federal money, there is ample evidence that the gap between what is known and what is done in education does exist. And, the gap does not appear to be narrowing.

Studies indicate a considerable time lag between research and classroom application. A congressional subcommittee recently found that it takes 30 years before an innovation in education has widespread adoption and 10 to 15 years for even the first 3 percent of the schools to make significant changes (Education Daily, Feb. 18, 1962). At the same time, innovations in medicine are usually adopted in about two years. Goodlad, Cunningham, Brickell and Goldhammer have all developed the thesis that change in our schools comes very slowly, even reluctantly, and at a very uneven rate (Designing Education for the Future Project, 1967). Even in those schools reputed to have new and innovative programs, closer examination reveals that many changes are more publicized than real. Goodlad has pointed out that despite outward signs, major changes in what happens between the teacher and student are almost nonexistent.

The gap between what we do and what we know how to do seems even more pronounced and critical in small, rural schools than it does in the educational system as a whole. Several studies have pointed out the fact that rural schools generally are less adaptable and less responsive to change than are other schools (Rogers, 1962). A national survey of accredited high schools recently found that small schools and rural

schools were less secure with innovation and more hesitant to change than their larger and better-equipped counterparts (Cawelti, 1967).

As a result of this inability to launch a much-needed rural educational renaissance, the children and youth of rural America are not receiving the quality of education that is their legacy: The President's National Advisory Commission on Rural Poverty (1967) reported,

"Rural adults and youth are the product of an educational system that has historically short-changed rural people. The extent to which rural people have been denied equality of educational opportunity is evident from both the products of the education and the resources that go into the system. On both counts the quality of rural education ranks low."

The problem becomes more clear as we examine it in each of four different contexts: at the level of community participation, at the level of the school as an institution, at the level of the learning environment and at the level of services provided by regional or state support agencies. We look first at the conditions that frequently prevail in the rural community and at some of the factors that effect citizen participation in educational decisions.

Community Participation. One potent factor which mitigates against change in the rural school is the absence of community pressure or demands for change. Small communities are traditionally fearful of change. They are faced with critical problems including those of declining population, disintegrating community structure, low income, poverty, out-migration of young people, inadequate social and economic services and lack of vital leadership. Rural sociologist Dr. Edward Moe has pointed out that many small communities refuse to face these problems squarely and tend to look backward rather than forward to solutions

(Moe, 1969). This makes for a deep suspicion toward any proposed change and innovation in social agencies.

Stemming perhaps from the old agrarian assumption that working the soil was a more virtuous way of life than that possible within a city, many rural school systems consistent with the view of their communities, maintain that the goals which they have sought, and the ways in which they have operated in the past, are still appropriate for the present, and indeed, will continue to be so into the foreseeable future. This traditionalist orientation does not deny the fact of change. However, rather than accepting change or attempting to influence its direction, traditionalism usually tends to reinforce the status quo.

Rural communities generally exist in regions geographically remote from major urban areas. In part, due to the fact of distance as well as that of sparse population, rural communities have limited contact with outside cultural and educational sources. What is more, typically little formal cultural impetus exists within the community itself beyond that provided by the local school, church or, occasionally, some other institution such as the grange. Many rural areas often are without local mass media. Newspapers are few and those that exist are frequently focused in upon themselves. Television is often nonexistent. Geographic remoteness, then is a factor which tends to isolate the rural community and its schools from the mainstream of American life.

Then, too, rural communities are penetrated by many agencies whose policies and procedures are developed on a regional, state or national level. Their interests tend to exploit the target community rather than to infuse it with new life (Moe, 1971). Many of the major decisions which affect rural communities are made beyond the village or county

boundaries. Also, the local operating offices of some of these agencies are so weak and others so seriously overloaded that the services to the community needs are inadequate. The decline in the locally owned institutional and community structures that formerly provided rural citizens with a measure of control over and pride in their social direction has further drained the spirit of independence and worth. As a result, rural residents are generally suspicious of the agencies that provide them services (Keach, Fulton and Gardner, 1967). They have become resistant to changes even in the inadequate services to which they have become accustomed.

The problem is exacerbated by widespread rural poverty. Communities often find their taxbase insufficient for substantially improving their educational program. Consequently, the resources typically available in major cities simply do not exist within many rural areas. Many of the social services and cultural opportunities common to modern American urban society are missing in rural areas. Public library services, recreational programs, concerts, college athletics, public health programs and modern medical services are rarely accessible to rural residents, if at all.

This is not to suggest that a vital, improvement-seeking community cannot initiate change in the school despite other factors operating against it; but in the absence of such support, negative factors are magnified and change in the school becomes most difficult.

The School as an Institution. The organizational structure and role relationships in small schools tend to reinforce the status quo. As a rule, these schools follow the organizational patterns of the large,

urban schools without having defined their own unique goals; consequently, it is rare to find a rural school organized to fulfill those goals most germane to its own needs. The result is manifested in the rural learner; he feels a sense of displacement rather than strong identity (Lineberry, 1963). The assumption that a more prestigious or urbane school will automatically have an enviable structure upon which to model the rural school organization is fallacious. In fact, the repeated attempts to pattern unique needs on such prepackaged models has caused a kind of rural trauma. The smaller school becomes incapable of responding to local educational needs and, frequently in defense, has little recourse but to systematically block any further pressures for change.

While an increasing number of rural school principals, superintendents and individual teachers are seeking to improve instructional practices in rural schools, they are often faced with obstacles that are all but insurmountable. Such barriers discourage and tend to drive out these innovative educators. One such obstacle is the monopolistic control individual teachers exercise over their self-contained classrooms. Working in isolation and without much supervision, the rural teacher usually determines, alone, the learning activities which students undertake in the classroom. His unilateral capacity to administer discipline and reward student achievement compounds this sense of control. As many rural administrators and teaching colleagues attest, it is difficult to develop a team approach to problem solving and shared decision making when teachers protect their individual monopolies. Even many small, two-room country schools tend to operate like two separate autonomies, so involuted can isolates become.

Another factor that tends to prevent rural schools from becoming responsive to change is the ingrown incentive system which rewards teachers mostly for success in developing the cognitive capabilities of their students; this, in turn, encourages teachers to reward their students for performance in the same domain. Such symbiosis discourages the expansion of achievement into areas beyond the academic and even more wasteful of human potential, it consigns the rural learner to wear whatever blinders his school bequeaths him.

Rural educational systems, along with others, are being subjected to pressures to change--mostly from without. Education codes are growing bulkier; special legislation is adding to the things that educators can and cannot do; pressure groups continue to make special demands on educators; and both student dissatisfaction and teacher militancy are exerting what at times seem to be insatiable external demands.

Besides these problems, there is internal confusion about rural educational goals, purposes and methods. Many solutions are being offered, but few of them are accompanied by documented evidence for solving the problem at hand. While both education problems and solutions abound, there seems to be little systematic, organized or logical procedure for relating solutions to problems or for dealing rationally with either the problems or the possible solutions. Yet the need for relevant reform in rural education persists and is critical for most of the students attending rural school.

The Learning Environment. For a variety of reasons, students attending rural schools are usually denied a voice in improving either

the quality of their own learning experiences or the environment in which these experiences occur. Too frequently their life experience has taught them the inexorability of events, such as the advent of spring, the need for irrigation or the certain necessity of the harvest season. They tend not to question nature's lessons, so they look at school as yet another absolute, and are passive about possible alternatives. Furthermore, they are frequently victims of a predetermined set of expectations and often of a rigid, lock-step curriculum. Their teachers, many of whom teach outside the field of their subject matter expertise, must rely heavily upon curriculum guides, textbooks and other instructional materials prepared elsewhere (Stutz, 1969). Because of the small size of the rural schools, few electives are available within the limited course offerings, so the curriculum choices available to rural young people are limited indeed. As a result, the student bodies of small rural schools have little opportunity to be a vital force in effecting improvements in their education. It is a loss, for the untrammelled imagination and the native energies of the earth-centered young, if harnessed, could revitalize our national educational aspirations.

Enrollments in rural schools generally average less than fifty students per grade. This is true despite the movement over the last few years toward consolidating small districts into larger ones. Small schools by definition have small staffs, which size, in turn, limits the range of staff competencies and talents available in a given school. Although pupil-teacher ratios tend to be low, and even though there are many new and excellent rural school buildings, the small size of the student body precludes the construction of many special facilities such as shops, laboratories, music rooms and media centers found in larger suburban or

or urban schools. Because of the low pupil-teacher ratios and high per-pupil cost of construction, the cost of educating rural students is high. Thus, the high cost per pupil of constructing special facilities and adopting new programs discourages many changes that larger enrollments would make economically feasible.

The learning environment in rural schools is further handicapped by the unusual dependence upon instructional materials and curriculum developed by and for larger metropolitan districts. Often these materials contain concepts and language with which rural youngsters are entirely unfamiliar. These materials rarely build upon the spontaneous concepts rural youngsters have acquired through their concrete experiences with the out-of-doors, farm chores and community participation. Also, rural teachers, without the support of competent educational leadership, are fearful of deviating from the procedures suggested by standard curriculum materials in order to make even the most obvious adaptations suggested by the rural setting or by an individual child's learning needs. The graded textbooks and other materials encourage a rigid organization even in classrooms containing students from several grade levels. And, even though the class size may be small, the typical instructional practices make little provision for the wide diversity of student needs.

The course of study is usually the traditional subject matter curriculum with its heavy emphasis upon verbal learning and academic skills; the learning activities rarely capitalize upon or relate to the day-to-day, in-life world of rural youngsters. There are few excursions into the community or the rich natural environment in which

the rural school has its setting. (The "city" curriculum does not "call for" transactions with the rural environment.)

While scrupulously adopting the format of the traditional classroom anywhere, the rural school lacks many of the resources that are enriching in larger schools. There are few central libraries or instructional materials centers. No psychologists and few special education personnel visit the school to give specialized help to the handicapped. The high per-pupil cost for instructional salaries allows only meager funds for the purchase of standard supplies and equipment; virtually no resources are left to be invested in the kinds of materials and newer technological devices that would permit students to have a broader range of choices or to engage in more productive or exciting learning tasks.

Courses requiring special equipment and specially-trained teachers are not often included in the programs of small isolated schools, and the rural schools rarely use the local businesses, industries and institutions to provide hands-on learning experiences. Thus vocational education is extremely limited in rural high schools (Waybright, 1969). The typical vocational educational program seldom goes beyond a few courses related to secretarial training, home economics and vocational agriculture.

Programs in rural schools that help students make realistic career choices usually are not an improvement over the career development programs themselves. Few rural schools have vocational guidance counselors; testing programs that assess career aptitudes and interests are pretty skimpy if they exist at all; opportunities to explore career alternatives and to receive accurate and helpful occupational information rarely exist and practice in making career decisions is almost

nonexistent (Altmiller et. al., 1963). Thus, rural students have little information upon which to base a career choice and very little assistance in making one. It is understandable, under these circumstances, that rural-to-city migrants are found in disproportionate numbers among the unemployed and underemployed city dwellers (Ziesel, 1965).

To make matters worse, mostly because a rich vein of advantage remains unmined, what goes on behind the rural classroom door is not always the kind of exciting, highly relevant, warmly humane program one might expect to find in the flexible and intimate setting that is so easily possible in the small-sized rural school. Instead, many rural classrooms are unimaginative replicas of the traditional classroom setting in large school, viz., the teacher in his traditional place at the front of the room; the twelve to twenty students seated in desks arranged in straight rows (Stutz, 1969). If there are two grade levels or two subjects being taught in the room, the students are frequently arranged according to their grade level or course of study.

Of course there are many exceptions, but even the best rural classrooms fall quite short of taking full advantage of their small enrollments; they often fail to utilize the resources of the rural setting to provide a widely diverse rural student population with effective, appropriate, option-filled learning opportunities. The advantage of the rural classroom, that potential laboratory of humanity which can give a young person his sense of self-in-relation-to-others, is too often by-passed to leave him, instead, with a sense of loneliness, self-apology and aimless hostility.

Support Agency Services. Rural school systems rarely get the help they need to initiate and implement planned innovations that solve critical and local educational problems. Because rural school systems are small, they lack the capability of engaging in sophisticated planning, curriculum development and staff training. Unlike their large urban counterparts, rural districts are not self-contained. They must rely upon outside agencies or their own cooperative alliances to secure many of the services needed to support local development.

The help that such agencies, as state education agencies, intermediate districts and teacher training institutions have been providing rural school districts has been insufficient, duplicated or overly prescriptive and in many instances inappropriate to the size and unique characteristics of the local system's needs (Morphet and Jesser, 1970). For example, inservice training for rural teachers and administrators mostly consists of preprogrammed college courses; because a minimum number of enrollees are required to make the course economically feasible, many of those persuaded to take a particular course have no pressing need for its substance. Also, universities and colleges are generally charged with the responsibility for recruiting and training potential teacher candidates. They have the added responsibility for either directly accrediting their graduates or recommending that the state do so instead. By defining the criteria for admittance to teacher education programs and by determining what training experiences and competencies are required for certification, the universities and colleges handicap rural school systems in their approach to change by maintaining monopolistic control over both the population that is

authorized to teach young people and the ideas they bring with them into the classroom.

State agencies have been handicapped in providing leadership and services to rural districts by their traditional regulatory inspecting role. Special attention to rural districts has been required because these small districts have difficulty meeting even the minimum teacher certification, building code and course offering standards espoused by state agencies. Further, because rural districts generally have no curriculum specialists on their staffs, state agency curriculum and instruction specialists are unable to perform as consultants. Instead, state specialists are expected to, and often act as though they do, have the answers to how teachers and administrators "ought" to behave and what the school program "ought" to be like (Bensen and Guthrie, 1968). Such prescription not only negates the phenomenon of constant change, it also seriously impedes the process.

Intermediate districts, as they have been formed in more and more rural areas each year, have tended to fall into one of two patterns: they either function as regional extensions of the state education agencies or as cooperatives of a cluster of local school system. In either event, these "new" rural education agencies have not moved in the direction of providing the kind of leadership and service that would encourage and support an enhanced capacity, an increased productivity and a greater initiative at the local district level. As a result, the capability of rural school districts to remain autonomous, self-renewing strongholds of local control and initiative has clearly and continuously deteriorated (Isenberg, 1971).

This, then, has been a review of some of the existing conditions that have tended to shortchange rural students in their education and act as deterrents to efforts to introduce educational improvements into rural communities and rural school systems. Fortunately, rural communities, rural schools and rural people have the potential for overcoming these obstacles and capitalizing upon the inherent strengths associated with ruralness. And an increasing number of rural residents--citizens, politicians and educators--are showing interests in becoming a part of a rural renaissance. What, then, is the potential for improvement?

The Potential for Rural Education Improvement

The consideration of various conceptions of goals and of what is known--or hypothesized--about reaching them lead to a comprehensive view of the potential for improvement in rural education. Close interaction exists between goals and strategies for their achievement. Four sources were considered: past attempts at improvement; visions of the possible; conceptions of national values and present knowledge about learning and the dynamics of change.

Lessons from the Past. Efforts to improve instructional quality in rural schools have focused on: (1) expanding curriculum offerings and learning opportunities through the use of multiple classes, programmed courses, correspondence courses, scheduling to permit independent study and in some instances cable and open channel television and amplified telephone; (2) individualizing instructional procedures through the use of self-pacing materials and differentiated assignments; (3) increasing the use of resources unique to the rural setting through outdoor

education and work experience; (4) promoting reorganization of rural districts to provide a more adequate tax base; (5) increasing the size of school attendance areas through consolidation; and (6) cooperation among several districts for services not normally within the capability of a single rural school.

A number of organizations within the past decade have made concerted efforts to make such changes. They include: Catskill Area School Study Council; State University College, Oneonta, New York; ESEA Title III Supplementary Educational Centers; single-state small school improvements projects, e.g., the Oregon Small Schools Improvement Project; multiple-state projects, e.g., the Western States Small Schools Project in Arizona, Colorado, Nevada, New Mexico and Utah; program efforts of regional educational laboratories, e.g., the Appalachia Educational Laboratory, Charleston, West Virginia, and the Northwest Regional Educational Laboratory, Portland, Oregon; and the nationwide association of 25 school improvement projects, National Federation for the Improvement of Rural Education (NFIRE).

The strategies employed in these efforts focused on inservice teacher and administrator training, shared services, workshops and conferences, demonstration teaching and consultant services. Incentives in the form of extra money, publicity and accreditation were used to encourage participation.

Within the original conceptions, these strategies worked and goals were achieved. However, such achievement highlighted the inadequacies of the original conception by being piecemeal and temporary, often involving only one teacher in a single innovative practice, affecting few students and seldom lasting beyond the tenure of the teacher or

administrator directly involved in the innovation. The introduction of extensive innovations in many schools did result in several teachers changing classroom management and instructional procedures, but, even after several years, these changes had not been attempted by colleagues.

These conclusions were derived from direct observations at schools which were targets for change. Most observers were startled and depressed at how little the change strategies had affected what actually went on within the classroom. A remarkable degree of similarity existed between the classrooms in "innovative" rural schools and those in most other rural schools. The objectives seemed untouched; the student tasks varied little from the usual passive and verbal learning pattern; and the pupil-teacher relationship remained primarily unaltered from the traditional pattern in which the teacher functions as the purveyor of truth in virtually all legitimate classroom transactions.

Such criticisms suggest a more complex and differentiated understanding of the goal of improving rural education than was available at the inception of those particular change strategies. No longer is it enough to affect only some teachers. No longer is it satisfactory to improve education for only a few students. Rather, the search is for a new relationship between teacher and student, a new set of objectives which emphasize active learning and preparation to face a world of increasingly rapid change, new ways to incorporate innovations and changes into school practice which will ensure their permanence.

The lessons of the past also suggest the need for a better understanding of the complex process of change. One teacher's changes in behavior do not ordinarily spread to other teachers. Improvements for some students do not guarantee that such improvements will naturally

spread to others. Individualizing instruction and shuffling schedules do not necessarily affect other aspects of the school's operation. Nor do greater size or increased tax base appear to create, by themselves, any improvement in student learning experiences. Rural school personnel tend to adopt innovative practices generated elsewhere, usually in the cities or suburbs, and rarely do the selections fit local needs. Extensive efforts were put forth in many communities to explain changes that were being made and to solicit support from school patrons. Nevertheless, an analysis of dozens of communities where change efforts were made failed to uncover a single instance where the community insisted that a new school practice remain after its main advocates had left.

The weaknesses of past change strategies are powerfully demonstrated by the complete lack of change in patterns of decision making. No effective local structure exists through which problems may be thought out and countervailing ideas and models analyzed, tested and developed to the point of becoming indigenous innovations. No effective mechanisms exist for involving citizens, teachers and students in systematic attack on the issues behind the growing sense of dissatisfaction with schools. Without these, no educational improvement which is both lasting and effective is likely to take place.

Visions of the Possible. The potential for improvement in rural education, as envisioned by the Rural Education Program focuses on four conceptions: what individuals growing up in rural America might become; what the rural school might become; what rural communities might become and what support agencies might do to help reach these ideals.

Potential of Individuals

Man can draw most fully upon his potential through his power to conceptualize about what he might become, as numerous scholars have suggested. Maslow (1968) suggests man has the capacity for self-actualization, while Kohlberg (1968) describes man as being capable of acting according to fundamental principles of morality, such as justice and reciprocity. Erikson (1964) believes the fulfilled man is one secure in his own identity. Piaget (1970) and Bruner (1966) see man as capable of cognitive functioning at complex levels. Wallach and Kogan (1965) discuss man's potential for creativity. None has yet developed a clear conception of the casual mechanisms which enable individuals to reach the higher levels of human functioning, but all have postulated such mechanisms and are doing substantial work in that area of thought.

Their thinking, however, has had a collective effect: to define education goals at a new level. Goals of education can no longer be thought of as the goals of schooling nor can many traditional goals of schooling, such as learning to read and write, be considered worthwhile objectives in and of themselves. Rather, increasingly complex and integrated conceptions of human functioning will guide goal development and knowledge of human learning will require coordinated efforts among social organizations--the family, the church, business and industry, special interest groups and the school.

As the vision of man's potential becomes clearer, the guidelines for action in the present--the determination of what ought to be done--become more obvious. Current prescriptions are difficult, but three

principles are accepted by most scholars as necessary components for individuals to move to increasingly higher levels of functioning.

- Individuals need autonomy and responsibility for action. Learners should participate in situations where they must make decisions and be responsible for the outcomes.
- Learners should participate in problem situations where satisfactory resolutions require them to function at increasingly higher levels.
- Learners need choice and diversity. To assume that all people must master all levels of human functioning is erroneous. As possibilities for human development become clearer, the need will increase for developing--and valuing--alternate patterns of human functioning.

Our view of an improved environment for learning and living in rural America, then, is one in which human potential is actualized. Arranging the conditions for higher orders of human behavior will require a more complex engineering of the learning environment than anything presently conceived. Our beliefs and assumptions about that environment form the basis for a description of the conditions required to encourage and support rural education improvement.

Potential of Schools

The history of educational reform is filled with attempts to develop more satisfactory conceptions of what schools might become. Unfortunately, other forces have consistently overwhelmed proponents of humane and organic educational environments such as John Dewey and A. S. Neill, with the result that their thinking, writing and even demonstrations have had little effect on day-to-day practices.

Renewed interest in the potential of schools, however, is seen in the establishment of alternative schools within public school systems, as well as the growth of free schools, street academies and "schools without walls." If changes in student learning environments (as suggested in the previous section) are directed toward independent decision making by each student on such matters as what he will do, how he will do it and how the quality of his work will be determined; toward allowing him to take as long as he wants and needs, and changing his mind if he deems it necessary; toward encouraging him to help other students, and comparing his performance to his previous one, rather than to that of other students; then, the school reform must be directed toward creating an institution which can generate, support and encourage such activities.

School staffs are increasingly assuming more helpful and supportive roles in relationships with students. Their responsibilities are beginning to focus on managing materials and resources needed by students, providing encouragement and assistance when needed, making constructive suggestions and assisting students to make better decisions. They are also attempting to model responsible, decision-making behavior themselves, working as problem-solving task force groups to consider school problems and make decisions among available alternatives for solving them. The organizational model for school staffs is increasingly toward allowing each teacher and the principal large areas for professional judgment and decision-making responsibility instead of having most decisions handed down in a rigid, hierarchical manner (Designing Education for the Future Project, 1970).

In this new movement, attention is being given to interpersonal skills and to improved information management support, such as use of computers. During the next decade, fundamental changes in communication systems will remove the dissemination of information as a major task of schools (Coleman, 1972). Home video players, for example, might well bring basic instruction to the individual student so that he will not receive information by coming regularly to a central location. Students will congregate for group activities and to receive guidance and planning help.

Growing in significance and support is the goal of integrating the young into functional community roles that move them into adulthood, i.e., to be involved in real life while learning.

To accomplish this, the school must be integrated with service organizations, such as those providing medical and welfare services so that students can help in them. Since the school's function will no longer be to protect the child from society, but rather to move him into it, the school must be integrated with other organizations of society and not insulated from them. The rural students also need opportunities to develop a sense of stewardship for their home towns and homesteads rather than the current, all-too-prevalent negative attitudes that make them ashamed of their rural habitat (Coleman, 1972).

The way schools are organized for instruction and the nature of the students' learning tasks are changing because of these new goals and because of new understanding about how learning takes place. The notion that learning is most powerful when it is instrumental to "doing" is gaining support. The principle orientation of the school is shifting toward the production of services and the practice of competencies for

living. The development of responsible and productive human beings is an emerging concept of what is the future role for schools.

Potential of Communities

As conceptions of man's potential have become more complex, so have the definitions of human communities. In the last decade an increasingly mechanized and specialized society has produced alienation and estrangement. But, a countermovement of significant proportions has been growing, characterized by community psychiatry, T-groups and associated interpersonal communications training, astrology, fundamentalist religions and experimentation with the occult. Moe (1971) suggests that this movement is a reaction to the fact that conceptions of possible human communities have not kept pace with the invention of more specialized and differentiated human occupations. Thus, it is now important that powerful conceptions of possible human communities be developed. The rural community not only presents a logistically manageable site for experimentation, but it also has a critical need for new structures and processes of citizen involvement to replace those long since lost or overwhelmed.

Some dimensions of improved human communities can be derived from developments underway. The most evident is the generation of decision-making methods which provide a sense that all individuals or groups are heard and can influence decisions, even though decisions may go against their desires. Thus, modern organizations, including communities, are challenged to develop more legitimate decision-making structures. The experimental models involve regular participation of all individuals and groups, or their representatives, in all decisions which potentially affect them.

Another major trend is the development of temporary systems for specific tasks: a group organizes itself in a certain way for a limited period of time for a particular purpose, a self-destruct mechanism enforces evaluation, and if needed, a new, hopefully improved structure emerges for another purpose and a delimited period of time. Deliberate social experimentation is increasing and it is possible that it can derive much of the meaning of human life.

Expanded conceptions of communities can help in prescribing educational activities. Providing experience with alternative decision-making structures and helping residents cope with temporary systems may be important educational goals for students and adults alike. In the absence of a well-developed instructional theory to develop such capabilities, educational settings should provide opportunities for experiences in such situations.

Potential of Support Agencies

The present concerns of support agencies and state and regional departments of education are certifying, accrediting and otherwise "inspecting" the educational process. These concerns should be expanded toward simultaneously providing leadership and encouragement to students, schools and school districts attempting to move in new directions and supporting them with resources and trained personnel.

The state and regional education offices contain the potential for marshalling support services from throughout a given geographic region. They can offer consultation services to schools and regional centers engaged in curriculum development functions. They also can provide an important communication link between schools and regional data storage and retrieval systems, so that curriculum information can be made

accessible as students are engaged in appropriate individualized educational programs.

The state and regional education offices can serve as an interface between schools and regional noneducational agencies. They can be the mechanism by which regional planners, county health and welfare agencies, county libraries and other organizations become involved in the process of education. Similarly, they can help people within the education institution use the services available from these organizations. They can also provide the services necessary for bringing about school change by bringing information of new programs to schools engaged in the process of inquiry and growth--as a facilitator rather than judge. Perhaps the critical function is to provide a mechanism--indeed, a physical location--where school personnel can come in contact with new programs, ideas and procedures and from which they can learn about alternatives which may help them solve their problems. The agencies merely need to be assisted in providing this leadership, thus becoming an important influence in school and community redevelopment.

Tenets of Democracy. The review of past attempts to improve rural education and conceptions of how to enhance human potential yielded guidelines for bringing about effective, efficient and lasting change. Yet the capability to act needs to be controlled and guided by a set of values.

There is a long tradition of careful inquiry into the nature of American values and how they interact with and influence the nature of actions Americans believe are legitimate (Beard, 1934; Myrdal, 1944; Oliver and Shaver, 1966; Newmann, 1970). These tenets of democracy are

found in most major public documents--the Declaration of Independence, the Constitution, the Bill of Rights--and operate so strongly in America that Myrdal labeled them "The American Creed."

In general, abstract language, these tenets include the following:

- The worth and dignity of the individual
- Equality
- Inalienable rights to life, liberty, property and pursuit of happiness
- Consent of the governed
- Majority rule
- Rule of law
- Due process of law
- Community and national welfare
- Rights to freedom of speech, press, religion, assembly and private association

Without attempting to recount the complex interaction among values and actions that Myrdal and others have explicated in detail, we will state only that these normative conceptions or ideals provide American communities with standards by which common problems facing the community can be described, debated and evaluated. The most important characteristic is that simultaneous allegiance to such values at an abstract level often leads to conflict when applied to specific issues; the community must decide which value takes priority. For example, should equality take precedence over property rights by forcing property owners to rent to Negroes? Should the welfare of the community take priority over due process of law by limiting the rights of some individuals--for instance, jailing known criminals without indictments--in times of

crisis? Much of American political conflict, and a great deal of Constitutional and legal tradition, can be interpreted as an attempt to determine which of the basic values take precedence in specific instances.

We believe in these tenets of democracy, and think that to the degree possible the structure of educational experiences for individuals of all ages ought to be consistent with these values. Recent court decisions have attempted to specify to what extent such values apply to students in schools. However, a long legal tradition indicates that until the age of majority children are less than equal to adults. If that is so, to what lengths can adults go in doing things to children under the principle that they know what is best for children? Every effort should be made to allow even the youngest of children to operate within America's tenets of democracy.

Present Knowledge about Learning and the Dynamics of Change. The principles derived from historical, philosophical and value bases are supported by recent research in the social and behavioral sciences on the factors which lead to optimum learning, productivity and quality of work.

American industry has been especially active for the past 10 to 15 years in probing such research literature and experimenting with incorporating relevant insights through job redesign, job enlargement or job enrichment practices. Drawing heavily on the work of Maslow (1968), Herzberg (1966), McClelland (1969) and McGregor (1960), evidence grows that industry is developing integrated theories of improving productivity and job satisfaction.

This movement's key principle is to enable the employee to manage more of his job, which includes planning and controlling as well as "doing." Greater responsibility is placed on each worker; procedures are evolved for considering contributions of the rank and file in company decisions; and individuals participate in decision making concerning the processes and circumstances of their work.

The essential finding of these industrial experimentations is that such approaches result in previously unrealized economy, efficiency and quality of work. They improve employee morale, increase production, reduce turnover rates and generally are financially profitable.

Current research on memory and learning (Kumar, 1971) has led to similar findings. Learners have longer retention of basic principles when experiences require the learner to apply these principles to real or realistically simulated situations which have meaning for the learner and to gain ownership of the principles before introducing elaborations. Ownership and individual responsibility for acting lead to greater learning.

The recent work of Asahel Woodruff adds significantly to present knowledge about learning. He has attempted to identify and apply the most pervasive principles of learning found in the literature of psychological research (Woodruff, 1972). Woodruff claims that the only model of human behavior and learning that is complete enough for educational planning comes from the field of biology--the psychic adaptation model--and that it can accommodate, at various points in its subprocesses, all of the current psychological learning models. Furthermore, states Woodruff, it has the qualities of a closed cybernetic system: all basic behavior processes that carry the burden of human learning--in daily

life both inside and outside of school--can be located within the model. The adaptation concept of human behavior is diagrammed by Woodruff in the following figure:

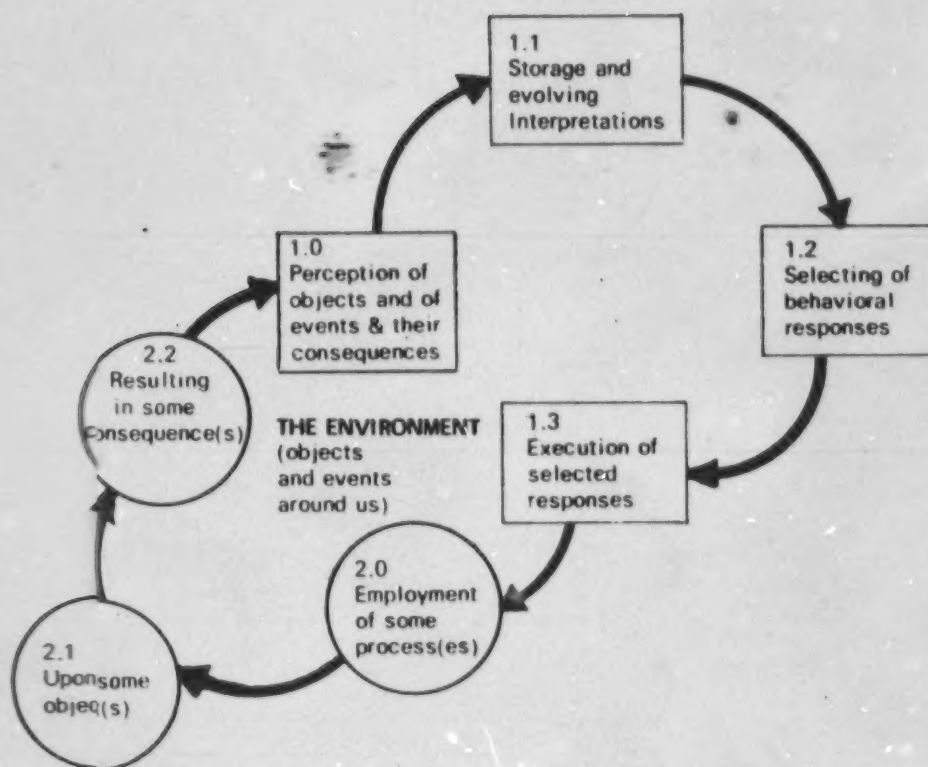


Figure 1. Components of the Man-Environment Interaction Process

According to this model, the following conditions seem to be universally present when behavioral changes occur.

- The person is doing something to satisfy an objective that is important to him.
- He is doing it in a real situation, to real things, on a for-keeps basis.
- The person acts overtly and verbalizes in response to, or as a result of, overt actions.
- What he does involves a full cycle of behavior:
 - Perceiving
 - Thinking and conceptual organizing
 - Choosing a goal and a line of response
 - Carrying out his choice and thus precipitating a consequence
 - Being affected by the consequence and reentering the cycle by perceiving some or all of those consequences.

To focus on changes in behavior, therefore, is to focus on learning. Changed behavior is, in many ways, the best definition of learning. We submit that a community or an institution can learn in an analogous sense to an individual: it can deliberately change its patterns of behavior. The principles described for fostering individual learning apply also to institutional and community change.

The reviews of past attempts to bring about effective and lasting changes and of better ways to attain the higher levels of human potential and acceptance of the basic American democratic values lead to the conclusion that certain principles ought to be followed in future efforts to reform rural education. In a free society where people value local

control of schools and support social contract notions of consent of the governed, changes are more effective, more efficient, more appropriate and more enduring if there is adherence to the following principles.

- People who are affected by decisions should be involved in the decision-making process from the beginning, in a way that they can have influence on the decisions and feel a sense of ownership in any changes that are made.
- A carefully thought out, systematic process for decision making should be followed, which allows, in particular, for the open consideration of alternatives for meeting defined needs.
- Change strategies should focus not on individual or piecemeal change, but, recognizing the complex interrelationships among students, the teaching act, the structure of schooling and the nature of the community setting, comprehensively focus on influencing all of these factors.
- Outside resources, such as trained personnel and uncommitted funds, should be used for and controlled by the local decision makers to help solve local problems.

Consequently, these learning and change principles will be used as criteria for testing all of the general and specific strategies suggested by the Rural Education Program for improving rural education.

Critical Rural Education Needs

This view of what is possible in rural education and what potential exists for improvement identifies a number of critical needs. It becomes obvious that the learning experiences being provided rural students are not what they should or could be. As a result, most of the students

attending rural schools are failing to reach their potential. The schools they attend generally lack the capability to do much about the inadequacies that exist. Rural communities are without the mechanisms, processes, skills and resources for solving educational problems, and the programs and services of such support agencies as intermediate districts and state education have not been effective in helping rural school systems capitalize upon their local strengths and overcome the limitations.

It appears, therefore, that the most critical rural education needs are as follows:

- Trained change agents to help communities organize, acquire skills and engage in systematic change processes
- Materials to help members of rural communities participate effectively in identifying, analyzing and solving local problems
- Search and information-linking strategies to help communities utilize knowledge and other resources
- Educational consultants to help rural schools organize and become skilled in inquiry
- Clinical centers to train rural schools administrators
- Models for organizing inquiry teams to appropriately involve citizens, students and educators
- Guidelines to identify school problems, assess staff competencies, design and complete data collection and make decisions
- Curriculum to allow students to pursue goals that are meaningful to them

- Instruction to encourage decision-making and decision-executing competence on the part of the learner and to facilitate learning
- Learning settings to facilitate movement and nurture diversity
- Training in skills for state agency and intermediate district personnel to help local district personnel
- Programs by support agencies to encourage local initiative

Helping rural communities and their school systems solve the problems related to meeting these needs is the focus of the Northwest Regional Educational Laboratory's Rural Education Program strategies.

II. GENERAL STRATEGY

Introduction

Once we had identified the critical educational needs that would be the targets of our rural futures development strategies, we began the task of selecting an appropriate overall strategy that would harmonize with our principles and be effective in meeting the identified needs.

Three alternative strategies were considered in the process. The first was the strategy the Rural Education Program had been using to date, i.e., self-instructional systems for rural schools and a community-oriented change process for rural communities. The community-oriented change process was intended to get the community involved in initiating change in local schools and the self-instructional systems were to expand the curriculum offerings in small schools and individualize instruction--two of the most common improvements sought by involved communities. This strategy, according to the principles we seek to apply, has several shortcomings: (1) it encourages and supports piecemeal innovation; (2) there is little in this strategy for rural schools as institutions to help them respond effectively to the new demands being made upon them by involved communities; and, (3) the self-instructional systems were not harmonious pieces of a comprehensive curriculum design; there would be no way of telling what a total curriculum of this type would look like.

The second strategy that was examined is one commonly used in all circles of educational improvement, namely, to select a few of the most critical or most interesting educational problems and develop

solutions to these, hoping that someone else is working on related problems. For example, one might choose to alleviate the limitation of smallness by encouraging and facilitating rural school district reorganization and school consolidation; or, one might try to overcome some of the disadvantages of remoteness by creatively applying communication technology to bring rural students some instructional experiences they could not otherwise have. Again, one might work to improve the competencies of rural teachers to utilize local resources and individualize instruction through imaginative, inservice professional development program. This is a tempting strategy because it is relatively easy to define and to manage, and the problems to be worked on can be selected to match the interests and capabilities of the existing staff. However, as strongly indicated by the lessons of the past, this has not been an effective strategy. It has resulted in the piecemeal adoption of a variety of innovative practices that often affected only the structure of schooling; it seldom dealt with the quality of the learning experiences for students. Also, these kinds of changes tend to come and go with their advocates.

The third strategy we examined was the development of a carefully engineered educational program for rural communities, based upon some explicit, commonly agreed upon educational objectives. Such a strategy would include development and diffusion efforts that would systematically produce and implement the various identifiable pieces of the master design. But, while this strategy has the promise of efficiency, it violates the principles of local autonomy and interferes with the full realization of the potential of individuals and institutions.

Because of our assumptions, then, about learning, human dignity and each individual's fundamental right to a measure of free agency, we are prevented from designing and in any way imposing upon a client school or community yet another kind of wall-to-wall solution to their educational problems. In the first place, because such an approach does not take into account the rights of others, it would be immoral in a free society that values the principles of agency and self-determination. Also, it would not work because of lack of commitment and sense of ownership on the part of those who were expected to participate in and benefit from it.

The Laboratory's Rural Education Program is committed, therefore, to the notion that a better environment for rural children and youth and for rural adults, as well, must--and can--evolve from an inquiring group of citizens, educators and students who have gotten together in new ways, with new skills, more information and ready access to some new kinds of help in the form of materials, resources and trained consultants. The interventions we plan must focus upon the generation of a process through which rural schools and communities can realize their potential for (1) creating culture, (2) meeting and maintaining democratic social relations, and (3) developing individual self-realization.

Past attempts have taught us that the two critical elements in development concern first, the capacities of people, and secondly, the capacities of the systems within which and through which they live and work. A major consideration in enhancing the capacity of people is training in ability to change their systems and themselves so they can cope with the demands of an ever-changing environment. The building of self-renewing, self-correcting mechanisms and processes so that people

can organize themselves in a variety of ways, depending on the tasks to be performed, is imperative in institutional and community development. The lack of success in implementing lasting change in rural education has occurred because change strategies failed to adequately increase the capacities of rural people and the capacities of the rural school and its community to cope with the intended innovation.

For these reasons the Rural Education Program's selected improvement strategies emphasize the development of training systems for people who are to be involved in educational change, guidelines that suggest new structural patterns and materials that facilitate participatory decision-making processes for rural schools and communities.

Because the process must be both a learning and a problem-solving one, we have incorporated the best of what is known about learning and change. We propose to assist rural school staffs, rural students and rural citizens to become engaged in the systematic processes of inquiry and problem solving--through which they can have a more significant role in making decisions that affect them collectively and as individuals. A community-centered strategy will engage the school staff in systematically and continuously improving the learning environments for the students in activities that increase their competence to make and execute decisions regarding their own individual and group lives.

The process will be activated in rural schools and rural communities by trained consultants supported by special educational products developed by the Laboratory. The process will be activated by teachers who have been especially trained in strategies for engaging students in the self-enhancing processes of problem-solving, self-management and in-life learning. Students and teachers will be supported in these processes by

additional educational products especially developed by the Laboratory for that purpose.

We believe that many contemporary curriculum and instructional models violate some of the Rural Education Program's basic assumptions about learning, human dignity and emerging social values. Inquiring schools and communities must be able to examine proven education practices that are in harmony with these assumptions. The Rural Education Program proposes, therefore, to design a new type of curriculum that will serve as a model to local curriculum developers in producing materials that help rural students engage in transactions with their environment in pursuit of goals important to them. We reject the idea of a curriculum that is pre-engineered to a specified set of objectives. Equally we reject the romantic notion of a free-wheeling curriculum with no objectives. The curriculum development strategy we propose is the preparation of some thoughtfully prepared curriculum specification, sample materials and development guidelines that will improve the capability of curriculum developers to prepare carefully conceived independent instructional units. Our curriculum materials will serve as templates for both the development and flexible use of materials and encourage enhanced decision-making and decision-executing competencies.

The overall strategy then, that was selected by the Rural Education Program to meet the critical rural educational needs identified earlier, is to develop and disseminate products that will create in rural school systems and communities the capability for systematic change and participatory decision making. The ultimate goal of this strategy is the creation of more appropriate and effective learning experiences for rural youth so that they might gain more control over their lives and destiny.

This strategy, because it is aimed at releasing the potential of rural people and their institutions, is called the Rural Futures Development Strategy. Specific strategies will be designed for each of four components of the total rural education scene: the Community-Centered Rural Futures Development Strategy; the School-Centered Rural Futures Development Strategy; the Learner-Centered Rural Futures Development Strategy; and, the Support Services-Centered Rural Futures Development Strategy.

Substrategies

Our general strategy is made more explicit by the following three substrategies which explain how we will keep our product development efforts reality-based by working in close cooperation with clusters of operating rural schools, their communities and their intermediate and state education agencies. The three models are applicable in many specific situations. They are general in that, regardless of where or when they are used, they form the larger belief that informs smaller action.

A Model for Field-Centered Training. Because training is such an integral factor in the success of our Rural Futures Development Strategy, we have also developed a training model that has integrity with the general principles of learning and change.

Whether the trainees are rural administrators, classroom teachers, students or members of the local school board--and anyone qualifies--the key concept in this strategy is its field-centeredness. We believe it is necessary to work where the change will occur. All of us have

had experience with, and frustration over, voluminous instructions from above, rules for improvement that were conceived without any cognizance of the prevailing circumstances. Abstraction, absentee authority and idealism are antithetical to learning; and, we believe that a model for field-centered training, of whomever and for whatever desired end, should be concrete and real, developed "on location" where rural education actually takes place.

Since many of the products--and by products we mean tangible models, or field-proven materials created by the Laboratory--to be developed by the Rural Education Program will require training, we derived this second model to guide the design of our training experiences. Dissatisfied with some attempts to train or retrain personnel remote from the working setting, we created a model for Field-Centered Training which attempts to integrate several major approaches in a synthesis of training design. We explain below each of those approaches, their unique problems and strengths and how we propose to correct the problems while retraining the strengths.

Field Setting

In its broadest sense, field-centered training implies the performance of real tasks by trainees in an operational work setting, under some kind of supervision. The ability to learn from an operational setting, to develop generalizations and insights, is not something which usually happens naturally. Such reflection must be encouraged systematically through careful instruction, reinforcement and the coordination of formal instruction with the field experience.

The provision for, and management of, instruction and quality supervision has been a major stumbling block of field training. Further,

field placement organizations have a tendency to try to exploit the trainee, to use him where it suits the organization best, regardless of his personal needs. This shortcoming is not uncommon; how many times has a research assistant been the true author of a dissertation or a fledgling student teacher been prematurely abandoned by a disinterested supervisor? An effective field-based training program, then, must provide field placements that can resist the temptation for mock-training, reliable people whose training characteristics are generalizable across institutions and settings. If every field site were unique, training individuals to do the work of a particular site would be narrow and limiting; hence, the model here designed has broad applicability both for various kinds of trainers and various kinds of field sites.

The training model proposed here will solve the problems of supervision, instruction and trainee exploitation and lack of generalizability by creating special training sites which will involve a concentration of trainees. Personnel will be present at the site who have sufficient competence to provide a formal instruction program of seminars and individual work, to serve as role models and to supervise trainees through the change process. It will be the job of these instructors to establish procedures for protecting trainees.

The training model will operate with respect to three settings: if only a teacher is involved, the setting will be his class; if several faculty members are involved, the setting will be an inquiry team; if a change agent is being trained, the setting will be a Community Action Team in a community. In all cases there will be a task or set of tasks the trainee will be carrying out in the setting.

One assumption of the training model proposed here is that a project in one of these settings has great generalizability across institutions, sites or any number of different educational problems. The experience of being trained in these settings provides the basis for competent performance in a wide variety of educational problem-solving situations.

Clinical Training

Clinical training as used here assumes that there are work situations which are natural learning environments; that is, field contexts which, as part of their normal function, provide a strong impetus for the continual development and training of every person in that context.

Our proposed model of training views the actual work settings not only as the context for which individuals will be trained, but also as the principle within which the training will take place. Clinical training contexts, then, imply not only the performing and refining of tasks but also the reflection on short performance.

Systematic Instruction

Systematized instruction is essential to evaluate the relative success of the strategy. Also essential are mechanisms or ways by which to provide the instrumental skills and concepts necessary for the completion of any particular field task, as well as to support trainees' reflecting upon their field experiences and generalizing beyond those experiences. The proposed design does this by assembling both expertise and materials for systematic instruction at the work setting; through careful monitoring of trainee activities, it provides instruction at the time when the trainee finds it necessary for a task he is faced with performing.

Personalized Training

A program is personalized when it is made flexible in terms of what it permits a trainee to set out to do, how it permits him to do it and how often it permits him to change his mind about what he wants to do. Trainees will have different goals, learn in different ways and at different rates; an effective training program must provide a reasonable procedure for accommodating differences such as these.

In the proposed model, a large range of professional competencies appropriate to each setting will be specified and organized in a comprehensive grid. No one could expect to perform all of the competencies at a high level. However, each trainee will have his entering competencies assessed, and then will negotiate with a training staff member a proposed "competency profile" which will satisfy both the trainee and the training program staff as being worthwhile. Trainees will be helped to select and engage in tasks which require that they learn the various skills and competencies they have selected. A variety of techniques and approaches to learning these skills and competencies will be provided, including performance critiquing, formal instruction, individualized package units and simulated cases. Trainees will be able regularly to redefine and alter the proposed profile toward which they are working and replan their training program.

Competency-Based Training

Competence is defined as the ability of a person to perform tasks at a level for which he will be held responsible. The demonstrated capacity to perform a particular task under actual work conditions is the overall objective of this training program. Each of the skills and competencies identified in the comprehensive grid will be tied to

an activity or to the production of a particular product in a field setting. These products or activities will have specified criteria for judgment of performance adequacy. In most cases these outcomes will be specified by the trainee, in conjunction with the training staff. The staff at the training sites, along with the trainee, will apply the criteria to judge the adequacy or inadequacy of a particular performance and reflect this judgment to the trainee for his assimilation and growth.

Data Dependency

A data dependent program is one where, insofar as possible, decisions are made on the basis of systematic data, carefully collected and properly interpreted. In the proposed model, the competency profiles provide a careful documentation of a trainee's incoming competencies and of the exit competencies toward which he is working. Each new competence is assessed separately and recorded. Decisions as to which tasks or projects the trainee will undertake to develop desired competencies will be made by the trainee assisted by the training staff based on the continuously updated profile of that individual.

Trainee Monitoring

The central feature of the entire training program will be the mechanisms for guiding and monitoring trainee progress. These instruments are a competency profile and a behavior code. A systematic display of those skills and competencies which trainees might wish to learn to perform in actual job situations will be developed, with room to add new ones as they accrue. These skills and competencies can be linked to behaviors or products which would be manifested in the performance of each skill; the behavior code provides an instrument that may be used for observing and recording these behaviors. A set of

criteria will be developed for judging the quality of the products. The competency profile instrument, then, will be used to display the capacity of any individual trainee to perform any of the skills and competencies.

On entering the program, the level of competence of a trainee on each of the possible competence areas is assessed through an interview and through a sample set of situational assessment instruments. Then the trainee, in conjunction with the training staff, will develop a proposed competency or set of competencies toward which he will work in the training program. This proposed "exit" profile is displayed in conjunction with the trainee's entering profile so that the discrepancy between what he can do and what he desires to do is immediately apparent. This discrepancy is used in developing trainee tasks within any of the field settings in which the trainee is working.

A trainee takes on a plan which, if successfully completed, will give him a competency rating higher than his entering level and a step toward his exit profile. The trainee then engages in practice, supported by systematic instruction. Help in perceiving the effects of his practice and coaching in how to improve the particular behavior he is practicing is supplied by the field trainers. When successfully completed, his newly gained competency is recorded on his individual competency profile.

This mechanism has the potential for easy conversion to a computer monitoring device which could track the progress of very large numbers of trainees. While the data about the trainee's progress in moving toward his exit profile is generated and used at the field site, it could easily be transmitted to a central coordinating unit where an up-to-date file on the status of each trainee would be maintained. This

file could be used to identify any trainees whose progress is seriously behind normal and to provide them additional help. It could also be used to help trainees and staff decide when a shift from one project to another would further the trainee's development. This stage of efficiency would, of course, depend on the success of keeping the field work flow at capacity.

Training Site Operations

Each training site (a cluster of rural schools and support services center) will be responsible for six major functions: (1) providing a pretraining assessment and planning experience, monitoring trainees progress; (2) assisting the trainees in making suitable progress toward their negotiated profiles; (3) providing tutorial supervision and counseling; (4) organizing the use of instructional materials and techniques; (5) running regular seminars to deal with substantive content areas and problems of field training; and (6) such staff training as is necessary to ensure an effective training program.

This, then, is the model for field-based training. An explicit example of how it would work for teacher development will be found in the Learner-Centered RFD Strategy in the section titled Specific Strategies.

A Model for Field-Based Product Development. The overall strategy selected by the NWREL's Rural Education Program is to develop and disseminate products that will create in rural school systems and communities the capability for systematic change and participatory decision making. Its ultimate goal is the creation of more appropriate and effective learning experiences for rural youth so that they might gain more control over their lives and destiny.

These products will be designed specifically for use in "learn-while-doing" practice situations. Particular attention will be given to providing the learner with procedures for gaining an accurate perception of the consequences of his behavior as an important requirement for facilitating appropriate adaptations in his subsequent behavior.

It is a challenging task to develop products that have integrity with a set of basic principles and that can be used effectively in a wide variety of operating situations.

It is easy to control laboratory conditions so that development produces internal validity in its products. It is difficult, on the other hand, to determine the extent to which laboratory findings have external validity, or will work in the real world. Because educational products have little value unless they "work" under realistic conditions in realistic settings, it is extremely important that external validity be established at every stage of development. For this reason, field-based research and product development is preferred by the Laboratory because feedback is stressed and research results serve to activate involvement and participation in the planning, collection, analysis and interpretation of more data (Bennis, 1966); in turn, these guide further decision making. As a result, the products of development are not only more likely to be externally valid, i.e., generalizable to operational settings, but more acceptable to users.

Field-based product development also provides an excellent opportunity for programmatic research. The selected solution to most educational problems is a mixture of tested theory and empirical assumptions. The testing of the physical materials required by a product provides not only data for determining the efficiency of a product, but also

data that are valuable in determining whether or not the assumptions upon which the design of the product was based are valid.

The Rural Futures Development Strategy requires three different kinds of products to give rural communities and schools the capability of initiating and carrying out planned educational change:

- Products designed to guide the development and operation of programs and structures, i.e., models, guides, operations manuals, blueprints, etc.
- Products designed to train or teach people new competencies and skills for new roles, i.e., training program plans, training materials, curriculum materials, etc.
- Products designed as resources for these programs and operations, i.e., questionnaires, forms, sample materials, catalogues, etc.

Consultants trained in a field setting supported by special educational products developed in the field will become the catalysts for the change process in rural schools and rural communities. The process will then be activated by teachers who also have been especially trained in the field for engaging students in the self-enhancing processes of problem-solving, self-management and in-life learning. Students and teachers will be supported in these processes by additional educational products especially developed by the Laboratory for that purpose.

The following section contains a detailed description of the kind of development site we plan for these purposes.

A Model for the Operational Setting for Product Development. Given the validity of the foregoing model, we asked ourselves where, ideally, would training and product development actually take place? By referring repeatedly to "the field" we had worked on the assumption that a bona

fide testing ground, a rural situation in which our strategies could be tried, existed. Here, we propose to describe this setting in more detail.

The Cluster

Because a single rural school is often ill-equipped to commit the resources needed for intensive renewing experiences or because the investment of energy and funds would be inefficiently expended on one school at a time, we devised what we have called cluster sites. They become an inherent part of our Rural Futures Development Strategy, enabling us to carry out training and product development in the field. Such clusters, or groups of geographically adjacent schools served by a cooperative service center, would also provide the additional dimension of comparison, contrast and reinforcement for each of the participating institutions.

Cluster Support Services Center

Because of the small size of single rural schools and the limited resources available to country districts, rural school systems would have difficulty, on their own establishing and supporting the training and development activities required by the Rural Futures Development Strategies. Some mechanism becomes mandatory to gain access to those needed resources unavailable to them and to share the use of those near at hand. Accordingly, we have designed and are suggesting a Cluster Support Services Center as a means to this stated end. It seems obvious that efficient sharing of materials would require a linking organization with key retrieval channels kept clear and well-marked.

The Center would have the responsibility to provide such a linkage between identified needs within a community and its school, on the one

hand, and the human and material resources available to meet those needs on the other. In a very real sense, the Center would provide an interface function to resources not generally available to rural students and teachers.

The range of services such a center would make available is extensive. For example:

- Helping to identify and arrange for appropriate consultant services, including systematic training of outside community change agents and Institutional Inquiry Consultants
- Providing assistance in curriculum development, modification and implementation; and making available resource material, books, pamphlets, newspapers, reference documents and other printed or filmed materials not typically found in local school libraries
- Providing specialized training for teachers, school board members, community representatives, administrators and students
- Suggesting and gathering human and material resources to assist schools and school personnel in solving the problems they identify
- Providing the services which effectively link state and regional agencies with schools and their communities engaged in the processes of renewal

Intermediate Education Agency personnel and representatives from participating school districts and, initially, from the Northwest Regional Educational Laboratory will institute, direct and manage this operating setting.

The Northwest Regional Educational Laboratory will negotiate with school districts interested in establishing a cluster of participating schools and a service center, based either in an intermediate education district or one of the cooperating districts. The Center will serve as a place for refining the design and operation of the Center itself as well as for the training and developmental activities which will go on there. What is more, it will act as a model for shared decision making and for institutional renewal.

Cluster Centers Network

Eventually, the Rural Futures Development Strategies will require the establishment of a network of cluster support centers. This organization will allow for the marshalling of greater resources than what is available merely to one cluster center; such a pool of expanded resources would then be available for application to more rural educational settings than merely the one anticipated for developmental purposes. It will provide the setting for dissemination of change information among all rural school district members.

The Cluster Network will be coordinated by a Supporting Services Consortium made up of consultants from state departments of education, intermediate education districts and teacher training institutions, as well as the Northwest Regional Educational Laboratory. The Consortium will be a clearinghouse for new programs and practices in rural education. It will also serve in an advisory capacity to the Rural Education Program. With such foundational planning for the distribution and exchange of modern educational methods and materials, the Rural Futures Development Strategies could revolutionize the concept of rural education.

III. SPECIFIC STRATEGIES

Introduction

Once we had identified the several critical educational needs that would be the target of our Rural Futures Development proposal, defined a set of principles to guide our efforts, selected our overall strategy and created models to carry out our general strategy, we began the task of refining a minimal number of specific strategies as clear working dimensions of our proposal.

It was important to us that these strategies maintain fidelity to our undergirding principles and our general strategy. To answer this need we developed a generic learning and change process model that could act as a guide to the development of strategies for meeting specific educational needs. Since we need to be general enough to harmonize with our set of principles and universal enough to apply to a wide variety of needs, we call the model "generic."

The Generic Learning and Change Process Model

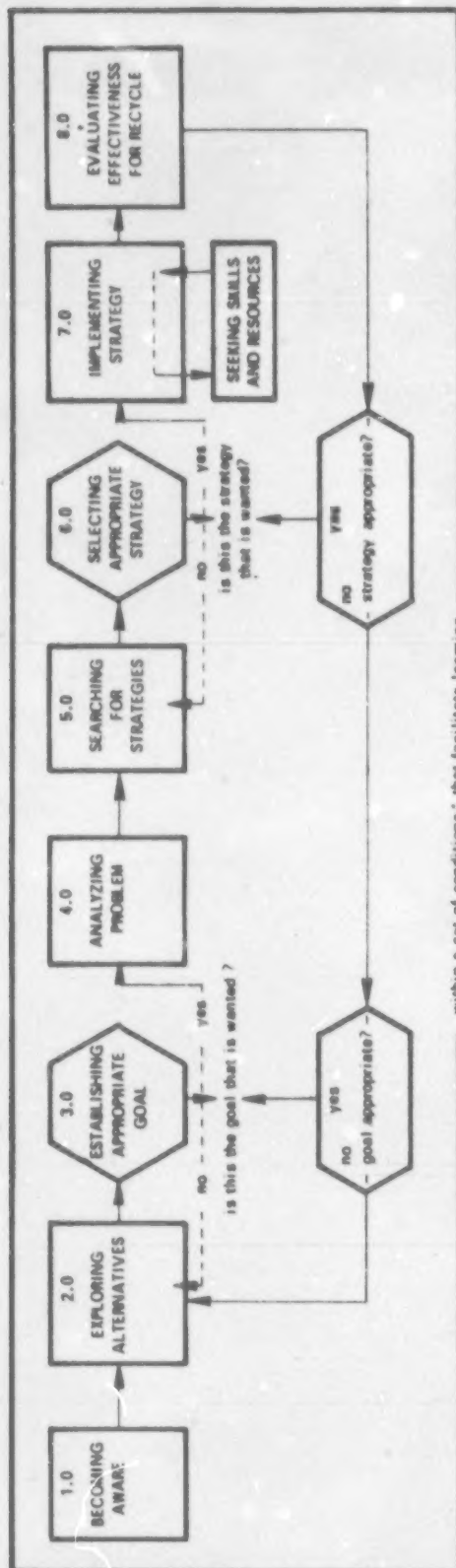
The generic model involves four basic conditions that must be met if learning is to be enhanced; it includes eight steps or stages for engaging a learner in the kinds of decision-making and decision-executing transactions with his environment that solve problems and cause learning to take place. The four learning conditions specify the nature of the environment in which the change process provides an orderly way of involving the learner.

We have adopted Woodruff's four conditions as one set of criteria for our Rural Futures Development Strategies, using the terms "School,

Community or Support Agency" in place of "person" when applying the conditions of those components of the program. Thus, the four conditions that facilitate learning become:

1. The person (community, school or support agency) is trying to produce something he wants to satisfy an objective that is important to him.
2. The person (community, school or support agency) is acting in a real situation, with real objects and his actions count.
3. The person (community, school or support agency) acts overtly and verbalizes in response to or as a result of his actions.
4. The person's (community's school's or support agency's) actions involve a full cycle of behavior:
 - Perceiving
 - Thinking and conceptual organizing
 - Choosing a goal and a line of response
 - Carrying out his choice and thus precipitating a consequence
 - Being affected by the consequence
 - Reentering the cycle by perceiving some or all of those consequences

The eight steps of our change process model (see Figure 2) have been derived from our reviews, detailed above, and from the classical problem-solving processes generally associated with scientific research and systems analysis. As can be seen, they provide a logical sequence of thought and action which leads to orderly problem identification, analysis and synthesis; and they appear consistent with our reviews of the past, with the future possibilities and with American values and behavioral



NOTE:

Hexagons denote decision points.
Questions to be asked at these points
are found within or below the hexagon.

1. Producing something desired
2. Acting in a real situation
3. Acting overtly, and verbalizing
4. Acting within a behavior cycle

Figure 2. Generic Learning and Change Process Model

research. The eight sequential steps or stages of our generic learning change process model are:

1. Becoming Aware that things other than what exist are possible
2. Exploring Alternatives of possible changes which can be made
3. Establishing Appropriate Goals based on the alternatives that seem desirable
4. Analyzing the Problem in terms of the discrepancy between the desired goal and the present actual state
5. Searching for Possible Strategies for getting from the actual state to the goal state
6. Selecting the Appropriate Strategy which gives the best chance of success within the resources available
7. Implementing the Strategy
8. Evaluating the Effectiveness of the Strategy and deciding whether to recycle and, if so, to what point in the eight stage model.

Using the four conditions and the eight steps we incorporated into our generic model (see Figure 2), we have developed applications of this model to each of the four areas: the involvement of the community in improving schools, the operation of schools as institutions, learning experiences for students and the services of support agencies.

The Community-Centered Rural Futures Development Strategy

The discrepancy between "what is" and "what ought to be" is probably more evident and dramatic as related to community involvement than any other aspect of rural education. As we have documented, the rural community is probably the most alienated segment of today's society. Having lost--or nostalgically believing it has lost--capabilities for local determination and grassroots control, and having been penetrated by a multitude of agencies whose policies and operating practices are established elsewhere, the rural community has little influence upon its social services or control over its social institutions. While the technological revolution that has mechanized the farm and multiplied its productive capacity has had a profound impact upon rural communities, it has not acted to improve the quality of community life as it potentially could.

Thus, lack of involvement in determining public policy and public services and suspicion of programs that agencies want to provide for it have justifiably earned for the rural community the reputation of being resistive to change.

A critical need exists, therefore, to encourage rural communities and their residents to regain a sense of ownership and control over the programs and decisions that affect their lives and the education of their children. It is toward this goal that the Community-Centered RFD Strategy is focused.

Application of the Model. Looking at the rural community from the perspective of the model developed by the Rural Education Program, it appears that a community which could be called "inquiring" represents the necessary conditions for relatively permanent change within the

school. Unless the community shows both a demand for change and a sense of possession or ownership in new programs, the school professionals, the board and the students will be unable to influence the status quo in any material or lasting fashion.

Therefore, the ideal rural community is one in which a broadly representative cross-section of the community is continuously involved in a systematic process of planned change to improve its schools. Initially the community would require the services of an external change agent, but it would become self-renewing and would acquire the skills, structures and processes for engaging continuously in planned educational improvement after the change agent departs.

The Rural Education Program has been aware of the need for a facilitator since 1968 when it identified its intention of designing, developing and field testing "a change model which can facilitate the implementation of the program improvements (a total educational system redesign) in rural schools of the Northwest." This early conceptualization of the model attempted to create a favorable climate within the rural school-community for the self-instructional systems being produced within the Laboratory. When the development of such a model began, it became apparent that this approach was too narrowly focused and manipulative in nature. As a result, the model was broadened to enable community leaders to view many alternatives and to make a choice among them based on their own set of values. Change process strategies which were incorporated into the model involved the application of research findings as reported by Thelan, Guba, Rogers, Moe, Jung, Lippitt, Havelock and others. During 1968 and 1969 parts of the process were developed and used in exploratory tests

in Grand Forks, B.C.; Grass Range, Montana; Eureka, California and Kremlin, Montana. All parts of the model were used together for the first time in Seldovia, Alaska during 1969 and 1970. Subsequent applications have included Inchelium, Washington; Healy, Nulato, Wrangell and Juneau, Alaska. Initial uses of the model in these limited field conditions have proven successful. Refinements, additions and changes have been made with each field application and have been based on field experiences, evaluative feedback and a continuing search of research literature on educational change.

Continuing commitment to the development of change strategies has been very high in both Alaska and Washington. During 1970 and 1971, a special contract was written in Alaska amounting to over \$125,000 in personnel time and money; the work plan involved two state educational agencies and a local borough in four applications of the Change Model at an Indian Reservation community. Stages of the model are presently being used in still another predominantly Indian community, Neah Bay, Washington.

The process we have been developing is based on the view that the community (students, school staff, citizens) can become a learner system and therefore, the same procedures for learning apply for them as well as for an individual. A condensed version of these procedures may be stated as: awareness, planning, doing, seeing and replanning (Moe, 1969). The four basic conditions identified by Woodruff and explicated earlier in our Learning and Change Process Model are appropriate when considering the community as a learner system:

- 1 A representative group from the community is trying to produce something the community wants to satisfy an objective which it has identified as important.

2. The group is acting in real situations, with real issues, and its actions count.
3. The representative group acts overtly, and reflects upon and reports on the results of its actions.
4. The group's activities involve a full cycle of behavior:
 - Perceiving
 - Thinking and conceptual organizing
 - Choosing a goal and a line of response
 - Being affected by the consequences
 - Reentering the cycle by perceiving some or all of those consequences

It is our belief that learning in this set of conditions reflects at least two important attitudes, which take on new meaning in each historic period, perhaps, but which are basic to our present culture. These attitudes are: (1) the concept of democracy, which includes both shared decision-making power and an educated electorate; and (2) the concept that each individual in the society has both worth and dignity, and is capable of managing himself.

In other words, an assumption of the Rural Education Program is that people learn best when activities have real meaning for them and when they are consciously and responsibly involved by their own choice.

Sommer (1969) says: "When someone comes into a situation, does research and then leaves, barely a ripple of change appears. It is better to get the people involved in the situation to conduct the research themselves, even if the research is of inferior quality. This is one lesson of the Peace Corps experience. Although it is easier for the corpsmen to build a well or a school themselves than to get the local people to do

it; if they do it themselves and leave, the situation would revert to the status quo quickly." Expensive experience in dissemination and installation efforts in education, industry and the military in this country shows the same thing: unless the recipient is also the instigator, the change seldom remains, or rarely works properly if it does remain. Ownership of the circumstances of the learning enhances the durability of the learning.

Watson (1967) states that, "Resistance to change will be less if administrators, teachers, board members and community leaders feel that the project is their own, not devised and operated by an outsider.... Resistance will be less if the project clearly has wholehearted support from top officials of the system."

Another advantage arising from the use of a planned change process is that which results from not getting lost in the little problems: establishing a new process revitalizes the decision structure of a rural community and helps in the setting of priorities, which makes it possible to work on problems one at a time. A solution reached with the cooperation of the entire community has a vitality that other sorts of solutions lack. Perhaps no community can solve all the problems facing it, but by engaging in an orderly decision-making process, more profitable use can be made of all existing resources. Reestablishment of the ties of communications between residents of rural communities, supplemented by skill training, has been found to be most useful in establishing this condition.

As resources within the community become available to the school by involvement in this process, skills for finding resources outside the rural community are also gained. The modern world has become vast, highly technical and highly fragmented; there must be conscious learning

of (1) usable processes for anyone searching for resources and (2) usable skills in sorting among and selecting from the vast amount of data which become available. The consumer unit, whether it is a single student or an entire community, must learn how to guide itself to only those services and resources it requires--no delivery mechanism has proven adequate for this task at present. Moe (1969) states, "Part of the difficulty arises from the human and technical complications involved. Part lies also in the inability of communities, local units of government and school districts to mobilize and effectively utilize resources. Community mechanisms for solving problems have become inadequate. Individuals and families, in turn, do not receive the help and support they need. The potentiality of community life under present conditions remains unrealized." By undergoing training in planned change techniques, and establishing mechanisms for these procedures over a period of time, the community begins to put itself together so that it can improve its schools in a truly democratic way.

To summarize, the specific application of the Generic Learning and Change Process Model to a community has some critical requirements for effective operation. First, those engaging in what may be termed "community learning" or "renewal" must represent a true cross-section of the community. No longer may only economically vester interests and powerful families maintain major decision-making power.

Second, the skills of inquiry and communication, necessary for search and deliberation, must be sought. Involvement in data-based decision making and group processes requires competence not generally found in people who have had little opportunity to participate in group decision making.

Finally, outside assistance, in the form of a skill builder, a process consultant and a person knowledgeable about how to discover new educational programs in successful operation elsewhere in rural America, should be utilized. The community leadership, in the broadest sense, must be exposed to new information in ways which it controls and directs and in a manner which makes the information usable in decision making about local school problems.

Critical Needs. It would appear, therefore, that the most critical needs, if rural communities are to be helped to engage effectively in shared decision making related to the improvement of their schools, are:

- The availability of trained change agents who can be retained by rural communities to help them organize, acquire skills and engage in processes for effectively working together to improve their schools.
- Materials in the form of guides, instruments, samplers, training materials and information units to help communities participate effectively in identifying, analyzing and solving local problems.
- Search and information-linking strategies to enable rural communities to obtain the information they need and utilize knowledge and resources in effecting educational improvement.

Selected Strategies. Utilizing the steps of the Change Process Model and our experience in working with rural communities, the community change process we propose comprises six overlapping and interdependent stages. The community:

- Seeks Help
- Identifies and Analyzes Needs and Problems
- Searches for Alternatives
- Plans for Action
- Implements the Action Plan
- Evaluates the Plan and Recycles

Each stages is designed to: (1) accomplish specified tasks; and, by so doing, (2) require skills to be learner; (3) result in products; (4) provide awareness of new information, ideas, materials and resources; and (5) provide feedback for conscious evaluation of the effects that stage. The process, thus, provides teachers, administrators, students and community members the opportunity to acquire the skills they need to work together to improve their schools.

Although the stages are stable in purpose, they vary in content from community to community because they are adjustable to local conditions. Because the effects are cumulative, however, all of the stages must be engaged in if a satisfactory level of process development is to be reached. The change agent who helps with this process is engaged by the community for a period of time (18 months is recommended) and comes in periodically to guide a local community group through the set of rational stages.

The key step in assisting a community to become involved with its schools in the new ways we have been describing is to bring into being a Community Action Team (CAT). This necessitates the services of a specially trained outside facilitator known as the Rural Change Agent who has been especially trained to come into rural communities to help establish effective communication channels and processes for involvement

that are self-renewing, and then to leave. The CAT would represent a broad mix of all identifiable segments of the community; the individuals within this mix are nominated by their peers and selected by the school board. This group of people, working together, will:

- Establish a face-to-face communication network with the community, for both taking information about the schools to the community and bringing information from the community to the schools to help in solving school problems.
- Establish support for the schools by bringing all of the resources of the community into play on the problems of the school through shared decision making.
- Acquire skills in communication, problem analysis and decision making.
- Establish contacts with networks outside of the community, to bring resources and data to focus on each problem.
- Function in new roles, which are made possible or necessary by sharing decision-making power among those affected by those decisions. These include new roles for students, staff, administrators and school board members.

Three elements are important in the strategy for getting a CAT organized within a community. The first is to have the school board identify the mix criteria that are appropriate to their community. The second is to elicit nominations of opinion leaders from the entire community. The third is to assist the school board in selecting two persons from the pool of opinion leader nominees to represent each of the mix criteria for the community.

After being organized, the Community Action Team represents the community members and keeps them informed as the team engages in a systematic process that helps them to identify educational problems, analyze them and develop and carry out a plan of action that improves the educational opportunities in that community.

Stages of the Community-Centered Change Process

The six stages of this process, including the initial steps for community involvement and organization of the CAT, are described in detail on the following pages.

Stage 1. The Community Seeks Help

- Stages of Change Process explained to school board, administrator and staff
- If decision is made to proceed, school board is asked to commit itself to (a) writing a letter of invitation, (b) a financial obligation, (c) involving itself, administrator, staff and students in stages, and (d) opening school records for use and study

When a school board has decided to consider this process, an initial contact is made with NWREL or another organization employing trained change agents, and an appointment is made to explain the process. If the board decides to use the process after it has been explained, definite commitments by each party are formalized. The agreement with the board must include financial arrangements, a schedule of events and a formal request for service. Additional explanations may be made to the community to gather baseline data about the school, community and staff and to make

plans, with a group selected by the school board, for the needs assessment activity in Stage Two.

Stage 2. The Community Identified and Analyzes Needs and Problems

- Plan content and methods of needs assessment
- Conduct assessment
- Analyze data and produce needs
- School board develops community mix criteria
- School board forms Community Action Team (CAT) based on mix criteria and opinion leader nominations
- CAT organizes and engages in skills training while working on identifying major problems
- CAT establishes priority of school problems from needs assessment data and information

This stage starts the community into the task of planning change for its schools by gathering data and utilizing that data for two purposes. The first is to gather data from the entire community their concerns about the schools and ideas for improvement, and to sort and order those concerns into a temporary needs assessment document. The second, equally vital, is formation of the CAT from nominations of opinion leaders, gathered from the community during the needs assessment. The CAT is central to the success of the project, both as the primary working body and as the basis for an information communication network into the community.

This community team renews the ties between segments of the community which may be isolated from each other or actively hostile. In one rural Alaska community, for example, where little or no communication previously existed, free-flowing communication was established among local coal miners, railroad workers, engineers and self-employed people, resulting

in a new sense of community being established. Using newly acquired problem-solving and decision-making skills, they were able to plan new elements of a curriculum and agree on a master plan for the school within a six-month period.

Stage 3. The Community Searches for Alternatives

- CAT divides into small groups (Task Force Teams-TFT) to study priority problems
- TFT's gather data and information on problem areas, identify local resources, learn skills in problem solving, decision making and communication as they work together
- CAT members visit innovative programs, gather data, debrief experiences and report to TFT's and community groups
- CAT writes goals and objectives and establishes an informal communication's network
- TFT's present the results of their work on specific problem areas to CAT for discussion and approval

This stage creates great changes in awareness among the members of the CAT and requires sufficient time to solidify that awareness. Information is gathered and considered about resources available both within the community and outside the community. Many skills are trained for and practiced during this activity. A feature of this stage is the development and use of an informal communication's network.

This network is formed by each CAT member identifying five to ten persons in his reference group with whom he will discuss issues concerning the CAT's work on school problems. The network both carries information into the community and carries back responses, ideas and concerns from the community. For example, the 22 member CAT in an Alaskan community

developed an Educational Goals Statement for their school and decided to gain reaction to it from the community. Each CAT member took the written statement to five or more of his friends. More than 150 people over a three-day period were contacted. The original statement was altered, based on these reactions, and recommended to the school board.

Stage 4. The Community Plans for Action

- CAT studies each TFT report, determines its feasibility and potential for school improvement
- CAT develops long-range plan based on TFT's recommendations
- CAT may use informal communication's network to gain community understanding and reactions to plan prior to recommending it to the school board
- CAT presents school improvement plan to school board for approval
- Planning skills needed by TFT's are integrated into the work as it is being done

Broadly speaking, planning for action (1) helps local leaders understand the need for advanced planning, (2) helps them gain sufficient skills in developing implementation plans so they will use them in the future, and (3) increases the chance for new programs to succeed by establishing widespread support.

Stage 5. The Community Implements its Action Plan

- CAT selects one project from the plan agreed upon by school board
- CAT develops a complete plan for implementing a new program which will also serve as a pattern for future implementations
- TFT's develop specific elements of the plan, such as evaluation, communication, scheduling, data collection and monitoring progress

- When the implementation plan is completed, the CAT presents it to the school board for action
- When the school board approves, the CAT puts plan into operation, usually by assigning responsibility for it to a TFT
- Additional school improvement projects are begun by CAT as time permits

The overall purpose of this stage is to employ local opinion leaders as partners in putting school improvements into effect. They will assist in beginning the effort, aid in the collection of data indicating the degree of success of the project and help to use this information to make it more effective.

Stage 6. The Community Evaluates the Plan and Begins Recycling

- The TFT is responsible for the first school improvement project, collects and analyzes information and data on new project and prepares and presents report to the CAT
- CAT examines report, accepts or modifies it and presents it to the school board
- CAT analyzes its own effectiveness as an organization
- CAT examines impact of Change Process upon school and community
- CAT may decide to determine what social and educational indicators reflect the educational health of the community and collect data to examine these trends
- CAT reviews educational needs and determines how it should continue and/or recycle some of the stages of the process
- CAT determines additional training needed for recycling activities

In all of the stages, the primary emphasis of evaluation is formative. At this stage training in summative evaluation is added. The accumulated skills of the members of the CAT at this point enable them to manage several sets of information: data from each earlier stage; baseline data about the community; assessments of changes installed in the schools; analyses of their own effectiveness as a community group and information revealing the impact of Change Process on the school and community. Using all of these and other data sources, the CAT prepares reports summarizing this information and indicating their interpretation of the present status of school improvement efforts within the community. These results are presented to the school board and the community-at-large in a variety of ways. This represents a reasonably high sophistication level of the CAT and the ability they have acquired to manage their own affairs. Only occasional visits by the change agent should be required in the future. The community now has ownership of many skills, including when and how to use outside assistance. The process of inquiry and problem solving has now been established.

Community-Centered RFD Products. The NWREL's Community-Centered RFD strategy, like its other strategies, is to develop products that will encourage and enable the initiation of this six-stage process in rural communities, facilitate the involvement of local Community Action Teams in the process, train a pool of rural change agents and enable local citizens and educators to gain in the skills of inquiry and shared decision making. Products to be developed are of two distinct types. The first includes: those generated by the Community Action Team as a result of its activities and to facilitate its work. These products

are both valuable to future efforts within that community and useful to other communities who may wish to engage in similar activities. Typical of the outcomes (products) produced within a community where the Laboratory's systematic change process is employed are:

1. A written commitment by the school board toward being involved together in a process of examining what their schools are accomplishing, acquiring new skills to deal with the present environment and attempting to find ways that will improve educational opportunities for the students and adults in the community.
2. A document which summarizes what citizens, staff and students feel are the strengths and weaknesses of schooling in their community, including their ideas on ways it might be improved.
3. An identification list of citizens, students and staff whom the community considers its opinion leaders.
4. An informal, two-way communications network which tests community understanding and support on educational problems and issues, but also serves as a forum for citizens to express themselves on school policies and programs.
5. A list of educational problems ranked into priority order and ready for study and resolution.
6. A widely agreed upon statement of educational goals for the community which serves as a general guideline against which to assess proposed new plans for school improvement.
7. A long-range school improvement plan, generated by citizens, staff and students with information and data they obtained from searching among the alternatives open to them.

8. A general plan that can be used to introduce new program ideas into the school. It includes such items as a clear statement of purpose, what are the acceptable signs of success, what data need to be collected and by whom, how the new program will be communicated to all interested individuals and groups, what costs are and who will be involved.
9. A plan for evaluation of (a) new programs introduced, (b) the effectiveness of the Opinion Leader Group (CAT) and (c) a list of social and educational indicators which show the general direction of the educational program in the community.
10. The residue of the process is a group of citizens, staff and students who have attained new levels of skill in dealing interpersonally with one another, who have confidence in dealing with problems and finding solutions and who know how to make decisions which reflect the feelings and understandings of the group members and the community.

The second type of product generated by the Community-Centered RFD Strategy are those developed by the Laboratory. They consist of three sets of products required to support the strategy:

- Products which support the ongoing activities of the CAT
- Products which support the activities of the rural change agent
- Products which comprise a training system for rural change agents

In order for the CAT to function effectively, each member needs basic competencies and skills in decision making, conflict resolution and communication. Our strategy for assisting a CAT to gain these competencies and skills is to provide training on-the-job for those involved. Skills would be learned within the context of doing, and the skills being

learned would always be instrumental to a task being performed. A wide variety of materials would be required by the CAT members and the change agent in obtaining the training needed from time to time. The training of rural change agents will also require a training system, competent trainers and some carefully prepared materials.

The basic assumptions upon which this effort is founded include the idea that change is constant in our society whether it is planned or not. Because of this, all materials will be assembled in a structured but changeable form: loose-leaf binders to which new material can be added and from which old can be subtracted; basic documents which appear annually in new additions and permanent documents with periodically appearing supplements.

Activity A. Products Which Support the Ongoing
Activities of the Community Action Team

If a community is to maintain ownership of its own decision-making process, the skills for that process must be widespread in the community. This necessitates preliminary training and materials. A variety of support materials to perpetuate the skills and maintain support for the process also will be needed as involvement continues. From our experiences in seven communities in Alaska and Washington during the past two years of exploratory effort, we believe the following products to be necessary:

1. Community Action Team Resources Catalogue
2. Awareness materials and plans for use with rural administrators and rural school boards
3. A search manual

These products will provide models of materials and processes which meet the learner's self-perceived needs, in a context of real materials and/or problems, in a manner at a time which the learner chooses. This set of products also introduces the community to several information networks already in existence, provides assistance in selecting helpful information from these networks and assists in creation of new information networks as they are needed by the CAT. A newsletter across communities involved in this process is an example of possible new networks which might be created.

Product 1. CAT (Resources) Catalogue

The catalogue will be a loose-leaf notebook containing materials and ideas for CAT members to use after the Change Process stages have been completed in the community.

The contents will include: (a) copies of training exercises in communication, problem-solving, decision-making and conflict utilization skills which may be used as refreshers of training and/or to orient new CAT members; (b) identification of role responsibilities of the CAT with school board, administrators, staff and community; (c) resource references which identify available information networks, additional skill training opportunities, sources of consultant help and some sources of free and inexpensive educational materials; (d) annotated bibliographic research references on change processes; (e) a listing of curriculum alternatives for rural schools; (f) an outline of materials which could be regularly included in a Citizens School Improvement Newsletter; (g) workshop plans for training new CAT members and/or renewal of present CAT members; (h) plans for identification and use of local media for carrying information about

school problems to the community; and (i) general procedures for identification of local resources to aid school improvement efforts.

Product 2. Awareness Materials and Plans for use with
Rural Administrators and Rural School Board

The focus of these materials will be on helping rural administrators and board members become aware of: relevant social and behavioral research related to school-community development; new leadership roles and the necessary skills for these new useful in working with students, staff and community leaders and opportunities to use them under guidance of trained leaders.

The contents will include: (a) an annotated bibliography of recent social and behavioral research related to change in rural environments; (b) roleplaying and simulations of alternative strategies used by administrators and school boards in communities where there is high involvement and decision-making responsibility is widely spread; (c) case studies, tape-slide presentations and videotapes to illustrate how these approaches were used in other communities and the resultant actions; (d) the administrator's new role as facilitator and implementor in a rural community; (e) the importance of identification of networks for communication and how to contribute to them; (f) an outline of a tested seminar program; and (g) suggestions for planning, arranging and conducting a seminar.

Product 3. A Search Manual

A manual will be developed which identifies practical procedures for citizens and staff to use in obtaining new information and identifying new resources.

The contents will emphasize existing and available information networks and suggested procedures to use during the searching process,

as well as organizations and agencies that might provide useful data and information for a local rural school and community.

The outcomes from use of the above set of materials are: ownership of the process of inquiry and planned change by the community and school staff, skill in functioning in new roles, confidence in individual ability to solve problems and a climate of high collaboration and low competition both in school-related affairs and in community relationships with other organizations and agencies.

Activity B. Products which Support the Ongoing Activities of the Change Agent

If a trained individual is to serve a community in the role of external change agent, he must have available to him a set of materials which provide him alternatives for coping with various situations and for meeting a variety of information and training needs. His activity in the community, as he aids in skill building and information gathering, involves utilization of all of the products listed as support for the CAT. In addition, our experience with trainees in Alaska in 1971 has led us to conclude that the change agent also needs a community resources manual.

As with the previously described products, this is an open-ended product: it will be complete, but mutable as new alternatives and data become available. Also, it was designed to model, through its form, tone and contents, the concepts that the learner/user is in charge of his own learning and learns best when meeting needs which arise from real circumstances in which he is voluntarily involved.

Product 1. Community Resources Manual for Change Agents

A loose-leaf manual will be developed which describes the model stage-by-stage and offers a large number of alternative exercises and procedures that may be used and/or adapted to local school-community circumstances.

The manual for each stage of the Change Model will contain a clear statement of purpose, the rationale, suggested procedures with directions for using them and samples of alternative exercises and approaches used successfully in other rural communities and schools. Also included will be excerpts from recent social and behavioral science literature, and a collection of material designed to promote awareness of educational change, to be used by the change agent as the need for this information arises in a community.

The outcomes from use of this product will be: capability of the change agent to use flexible activities and tools so he can readily adapt the change process to local conditions; support for the change agent's sharing of his own understanding of the change process theory and research; and a capability of the change agent to respond with informative materials to emerging awareness about educational alternatives by any member of the community.

Activity C. Products which Comprise the Training Plan for Rural Change Agents

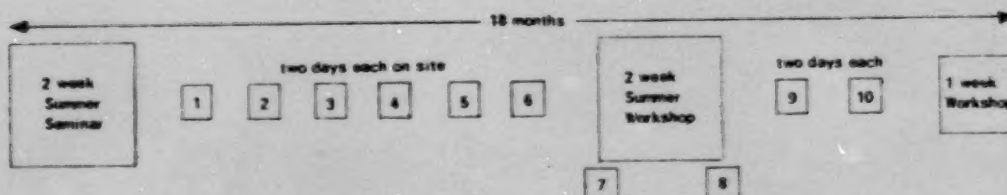
A change agent who is to support community involvement in school processes and develop skills in a community must have a set of skills of his own and support materials that are needed to assist him in this effort. These are to be developed, monitored and evaluated during an actual

field-based, personalized, systematic, competency based, training program. In support of this training program, two sets of products are required. These products, which will be developed in relationship to actual field experience are:

1. A performance-based plan for training rural change agents
2. Change Agent Training materials which will include, in addition to training materials developed by NWREL's Improving Teaching Competencies Program:
 - A bibliography and set of research readings on recent change process literature
 - Case studies of school improvement efforts
 - Tape-slide presentations illustrating stages of change process
 - Videotapes of community actions to improve schools
 - An analysis of the requirements for rural change agents
 - A monitoring plan for assessing field performance

Product 1. A Plan for Training Rural Change Agents

The proposed plan for training rural change agents will include both on-and off-site activities during an 18-month cycle. The diagram below illustrates the plan:



The 45-day training plan will begin with a two-week awareness and orientation seminar the first summer, followed by six two-day training sessions. The second summer will contain a two-week training session off-site and two two-day field-based training days. During the fall, two more two-day on-site training sessions will be held, concluding with a one-week training and evaluation workshop. The summer seminar and workshop will be conducted by highly skilled staff, such as a National Training Laboratory Community Development Trainer, assisted by other skilled persons who have been trainers in the Peace Corps, UNESCO and NWREL workshops. Several of the major experiences comprising the training are:

- Opportunities to study and apply information gained from exposure to the research literature related to change theory and practice
- Learning to be a change agent while actually involved in being one. This on-the-job training will include frequent opportunities to interact with a skilled trainer and with others who are involved in similar experiences. Feedback on field performance will be an integral part of the on-site training.
- Systematic instruction during summer workshops and at regularly scheduled advanced seminars will include simulated and role playing experiences which provide a realistic atmosphere for learning new skills in a threat-free environment.
- Opportunities to use a variety of media to gain a perspective and awareness of what the stages of the Model look like when used in actual communities. Participants will be encouraged

to generate their own documentation of critical stages of the Model while it is being used in their own situation.

- Developing contributions to the refinement and further development of the Model, its materials and training needs. The Model accumulates these field experiences as data and examples of community-school development efforts.

Product 2. Rural Change Agent Training Materials

Specific products which will be developed (and/or adapted from existing materials) to support the user-oriented training plan include, in addition to training materials developed by NWREL's Improving Teaching Competencies Program:

- An extensive bibliography and a set of research readings from business and management, the military and the social and behavioral sciences which relate to change theory and processes.
- School-community case studies which illustrate the impact of citizen, staff and student involvement and participation in decision making relating to school improvement.
- Tape-slide presentations to illustrate each stage of the change process; based on actual field experience.
- Videotaped examples of community actions during the process which illustrates new skills used by community leaders; actual solutions to identified problems and methods of dissemination of information to the community-at-large.
- A monitoring plan for assessing the field performance of change agents. Included are regular feedback devices as well as periodic evaluative checkpoints that will be used based upon performance criteria worked out jointly with the trainees.

The first set of outcomes from involvement with the training system products are: ownership by a group of change agents of the concepts of (1) planned change, (2) shared and representative decision making, and (3) assisting others from a stance of equality rather than superiority. These concepts will be experienced by the change agents as they are trained, be displayed by them in their dealings with communities and be shared consciously by them with community members as a part of skill training for the CAT. Confidence by the change agents in their ability to assist a variety of communities to engage in a community-centered process for planned changes in schools is also an outcome.

The second outcome is a set of skilled trainers of change agents who are able to use some or all of the products of this project to develop behavior in trainees consistent with the above concepts. Consistent with our philosophy that members of a community--or any learner system--learn while doing, we expect both the trainer and the change agent to be "learners as well as doers."

The foregoing product descriptions explicate the primary uses of each product. However, many of these products will be produced in the form of units which may have other users than those outlined here. Clear examples of this are the Search Manual and the "How to Visit Schools" chapter of the CAT manual. These are designed to be usable independently of the total change process, putting into action again the belief in the value of mutability and free selection of alternatives as underlying assumptions of this development effort.

The School-Centered Rural Futures Development Strategy

The School-Centered RFD Strategy seeks to develop the capacity for schools to examine and solve problems related to the operations of the school. By organizing as inquiring teams, using specified processes, and drawing upon the services of an outside Institutional Inquiry Consultant, school faculties can change the processes of schooling so as to provide better conditions for effective and self-actualizing student learning.

Application of the Model. In the same way that our generic learning and change process model can be applied to the community, it can also be applied to an institution such as a school and to the individuals who work within that institution. It is our contention that the reinforcement provided by adults modeling the behavior desired of students and the functioning of the school in harmony with the generic model would be beneficial to all concerned.

Williamson (1971) equates systematic learning and change processes with "inquiry." From a careful analysis of the interdependency between adult behavior in schools and that of students, he concludes:

The arguments and rationale for inquiry coverage in the school. Inquiry is not only the limited concept of a quality of professional behavior; it must become a descriptor of the entire school, the genre of the environment and climate within which the students and staff operate, and the prevailing characteristic of the goals, skills, and values that are the basis for the school's formal relationship to its students. The congruence (based on bureaucratic values that has heretofore sustained schooling) must evolve to a new congruence which is based upon the individual, organizational, and social needs of inquiry and self-renewal.

That the transformations in schooling implied from this discussion are not only conceptually sound but operationally feasible is

increasingly supported by the best contemporary scholars in such diverse disciplines as: organizational and social theory (Bennis, 1966; Clark, 1969; Gardner, 1964; Lippitt, 1969; McGregor, 1960; Maslow, 1965; Schaefer, 1967); general system theory (Bertalanffy, 1968; Buckley, 1967; Cadwallader, 1968; Deutsch, 1963); curriculum and instruction (Glasser, 1969; Piaget, 1970; Rogers, 1962; Schwab, 1962; Thelan, 1960; and psychology and human development (Allport, 1954; Kohlberg, 1968; Maslow, 1970; Piaget, 1970; Rogers, 1961). This fast developing body of thought and research lends substantial credibility to the vision that growth and self-renewal can potentially become a hallmark of American society and, in particular, that there can be self-renewing schools.

The basic implications of the Rural Education Program's vision for the school suggest the need for staff regularly to engage in inquiry into the effectiveness of the school program with respect to its goals and objectives as well as into the very purposes of the school. Individual teachers and even the school itself, however, are inherently incapable alone of achieving all of their educational goals. Resources both inside and outside the school must be made flexible and employable when they are needed to help solve a problem within the school.

Again it is an assertion of the Rural Education Program that inquiry as a routine function of a school will become a reality only when effective ways are developed to fundamentally transform the basic procedures and relationships of the school. For example, these procedures and relationships should be designed such that:

- They mutually facilitate the individual growth of the staff members and the continual development of the institution itself.

- They facilitate inquiry into the renewal of the school as well as the maintenance of it.
- They facilitate open, direct and honest communication within the school.
- They facilitate seeking, identifying and utilizing resources outside the school.

In his analysis of self-renewal in schooling, Williamson concludes that a self-renewing organization can be identified as one which functions across four hierarchical levels. These levels are identified respectively as:

- The level of operations. At this level the organization carries out the activities for which it is socially responsible. This is the level at which organizational policy is ultimately implemented.
- The level of regulation. At this level the principal function is to monitor the activities of the operations level in reference to the established goals of the organization. At this level, change is identified with mere adjustment of behavior within an established organizational structure.
- The level of learning. At this level of functioning the organization is able to recognize its structure and to change its goals based upon information both from within and outside the organization.
- The level of consciousness. At this level the organization monitors itself and its mission in relation to the changing needs of society. The level of consciousness requires that the organization be constantly defining and creating its role in society.

These four levels establish a hierarchy of adaptive and stabilizing processes. Each upper level makes flexibility and adaptation possible at the next lower level. Each lower level in turn provides the structural stability and control that permits the next higher level to function without throwing the system into chaos. In his explication of these levels of organizational functioning as they relate to the operational problems of schooling, Williamson makes clear that a school which is capable of functioning at all of these levels would also be one which is likely to satisfy the principles and conclusions of schooling that were derived in the previous section.

Central to Williamson's and the Rural Education Program's operational concept of a self-renewing school is the organizational unit of an inquiring team. Analogous in many ways to the Community Action Team, an inquiring team is defined as: a small, differentiated, temporary group which functions deliberately as a democratic open system in accord with clinical processes of inquiry, with dual responsibility for self-renewal and the solution of a problem that is relevant to the social purposes of the school. As defined here the concept of an inquiring team is clearly grounded in the same basic principles of democratic decision making, openness to outside assistance, systematic inquiry and action-oriented problem solving which underlie the entire thrust of the Rural Education Program.

The membership of inquiring teams within the school depend upon the nature of the problems they address. The criteria for membership on these teams may include:

- Competencies required to solve the team's operational problems
- Competencies required to facilitate interpersonal communication within the team
- Renewal and training needs of the team and the school
- Competencies required by the inquiry functions such as research, training and evaluation
- Diversity required by the team to be able to tap the necessary outside resources
- Inclusion of senior personnel in the group who are consciously able to take an objective perspective on the group's functioning and purposes
- Inclusion of representatives of those groups affected by decisions made by the team.

The concept of an inquiring team provides a problem-solving environment that seems to be appropriate in any situation in which: individuals can grow in the process of solving a problem; a diversity of interacting resources is required; decisions and actions can be improved through the continual review of those activities; and conceptual and empirical information can be effectively brought to bear on the problem. Viewed from this perspective, the concept of inquiring teams can apply to:

- The environment within which a group searches for meaning and solutions to their personal and interpersonal problems.
- The professional environment of teachers in search of the most effective strategies for the instruction of students.
- The decision-making environment in which policy is made in the school.

- The environment within which the community and the school together solve the problems of education in the community.

In other words, the inquiring team would seem to be a powerful enough operational concept so that virtually the full range of significant activities in a self-renewing school could be governed by a common and consistent set of organizational properties.

This, then, is our view of the ideal rural school--an institution that is self-renewing, where the faculty of the school is continuously involved together and with students and citizens in the process of inquiry toward solving the problems of providing effective and appropriate education for rural students.

Critical Needs. As pointed out earlier, rural schools do not generally operate as inquiring schools. Even in small two room schools the two teachers tend to act as autonomous individuals. The monopolistic decision making prerogatives of the several individuals and groups who man the classrooms, run the principal's office and constitute the local school board, tends to fragment the operations of the school into a number of independent decision making principalities. Also the remoteness of the rural school from university campuses and state education agencies with their resource libraries and human resources handicaps the rural school staff members from engaging productively in inquiry.

As we have seen in the previous sections, the promise of self-renewing rural schools demands that certain prerequisite conditions be achieved. These conditions include the following.

- The variety of flexible resources quickly accessible to the school required to help solve the range of problems of the school
- Special human resources easily accessible who are competent in the knowledge and technology of inquiry. These competencies are particularly necessary in the areas of research, training and evaluation
- Access by the professional staff to libraries, scholars and other sources of knowledge related to the problems of education
- The information management technology required to permit the collection, analysis, storage and delivery of data that permits individual learners, educators, community members, as well as inquiring teams to systematically make informal decisions
- A community whose resources are open to the school and which is committed to participating in the continual renewal of its schools
- A professional staff of educators within the school who are open to the resources of the environment, committed to inquiry, and have the basic intellectual, technological and interpersonal skills prerequisite to launching into a program of school renewal

The problems associated with achieving many of these "take-off" conditions are common to all schools. For example, the problems of staff training and socialization to the processes of inquiry are certainly not unique nor probably even accentuated by ruralness. On the other hand, it is apparent from the list above and the discussion of the problems of rural communities elsewhere in this document (see section II)

that the principle unique problem to be solved if rural schooling is to be self-renewing, is to guarantee accessibility and delivery of specialized educational resources to rural schools. Because of the complex nature of the problem the strategies that will be required must be far more sophisticated and flexible than the consolidation of resources strategies of past attempts to improve rural schooling.

The effect change, then, rural staffs are in critical need of the services of a consultant who was especially trained in the processes of inquiry and who could, therefore, help a rural school organize itself for inquiry, identify problems, assign clusters of decisions to appropriate teams and secure the participation of students and citizens in these processes. This Institutional Inquiry Consultant can help faculty members seek and obtain the skills and processes necessary for engaging in the operations of the school-based inquiry.

This is not to suggest that outside consultants to schools is a new role conceived and developed by NWREL. On the contrary, outside institutional developers have been assisting schools for many years with varying degrees of success (Bemis, Benne, and Chin, 1961; Bennis and Peter, 1966; David, 1967; Havelock, Huber and Zimmerman, 1970; Lake, 1968; Lake and Callahan, 1971; Leavitt, 1965; Lippitt, 1967; Roger, 1962; Rogers and Svenning, 1969; Schein, 1969; Schmuck and Miles, 1971). However, the unique characteristics of the Institutional Inquiry Consultant proposed here includes capabilities to work with teams of rural teachers as they themselves go through the critical steps of learning and change process.

There is also a critical need for professional educators in rural areas to have access to training opportunities through which they could grow in competencies to participate with others in planned change.

Selected Strategies. The Rural Futures Development strategy for schools will seek to develop training materials, resources and plans and procedures so as to trigger the potential for change, to assure that change is in a direction which enhances student learning, and so that students, the community and the staff all support the consequence of change.

The strategy focuses on changing the nature of the way schools operate. This involves changing the learning environment, the school climate and the context in which learning transpires as well as the structures of the school, the way it is managed, the questions which the school asks and the relationship between a school, other educational agencies and its community.

School-Centered RFD Products. The development of the capacity within schools for inquiry and continuous reform demands a set of products to assist. It is conceived that trained institutional inquiry consultants will work with rural school principals and teachers to help them engage in activities that will result in shared decision making and planned educational improvement. A training program for these institutional change agents will be developed as well as training materials that will enable staff members to gain new competencies needed for inquiry participation. The following is a list of products to be developed by the Northwest Regional Educational Laboratory's Rural Education Program over the next five years.

Consistent with the principle that people to be affected by a decision should have a share in influencing that decision, the School-Centered RFD Strategies have been developed under the assumption that

the critical group for change within the school is that of the inquiring team. To be effective the School-Centered RFD Strategies require materials to aid in the activities of the inquiring team, training and support materials for an outside institutional inquiry consultant, and a plan and inherent products for administrator training. Following is a list of activities, within which are the products, which will be developed by the Northwest Regional Educational Laboratory's Rural Education Program.

Activity A: Develop Products for Training
Institutional Inquiry Consultants

The Northwest Regional Educational Laboratory will develop a Field-Based Training Program for Institutional Inquiry Consultants. The training program will integrate already existing institutional consultant training program components, for example, those developed by NWREL Improving Teacher Competencies Program for preparing educational training consultant (PETC III) and by the Center for the Advanced Study of Educational Administration (CASEA), especially for training organizational consultants for schools (Schmuck and Miles, 1971). The training program will consist of actual experience in working with Inquiry Teams with a program to assist the consultant-in-training in analytic processes of assessing school inquiry progress as well as problems of implementation. The products to be developed will consist of a training program and an accompanying training materials kit.

Product 1. Materials Describing A Training Program

A looseleaf notebook will be prepared which consists of a description of a two-week summer institute, complete with theoretical and practical discussions of school and team inquiry along with an

explication of training activities and tasks appropriate for the seminar. The notebook will contain a list of competencies for inquiry consultants. It will describe training opportunities to study and apply information gained from exposure to the resource literature related to change theory and practice. It will describe procedures for training as an apprentice to an experienced Institutional Inquiry Consultant. It will suggest activities, tasks and responsibilities to be assumed during an academic year internship as an Inquiry Consultant Trainee. The materials will describe procedures for applying feedback on consultant performance. The materials will discuss the content to be reviewed in regular seminars and workshops scheduled throughout the academic year. Such workshops will include problem-solving discussions, group experiences, simulations and role-playing activities.

Product 2. Kit of Materials Required
for the Training Program

The kit of materials to be developed in support of the Institutional Inquiry Consultant Training Program will consists of materials such as the following: a bibliography and research findings on recent change process literature; case studies of school improvement effort; tape-slide presentations illustrating levels of inquiry; videotapes of Inquiry Teams acting to improve the schools; materials describing a set of criteria by which trained Institutional Inquiry Consultants can be judged; materials describing a monitoring plan discussing field performance.

The concepts of a materials kit is one in which the specific materials developed can be adapted and incorporated into different types of presentation, depending upon the purpose and mission for a given use.

Activity B: Develop Products which Support
the Activities of Inquiring Teams

Product 1. Inquiry Process and Resources Guide

A looseleaf notebook will be prepared which contains materials about School-Based Inquiry Teams. They will include (a) Theory of renewal; (b) Explication of a model for inquiry based on the Generic Learning and Change Process Model; (c) A process for developing and graphically representing responsibility for decision making within inquiring schools; (d) Case studies of Inquiry Teams meeting for purposes of institutional renewal; (e) Identification of process and communication skills necessary for effective functioning of the Inquiry Team; (f) Annotated bibliographical references on change and change processes; (g) A set of search processes and guidelines which would enable the Inquiry Team to locate and retrieve useful material and information for example, about new innovative programs with potential application for the rural setting; (h) Guidelines for informing other constituent groups, such as administration, school board, students and community, about proposed program changes.

Product 2. Materials to Build Inquiry Skills

This product will take the form either of a series of pamphlets or a hardback book. It will contain a set of readings from different disciplines and points of view relating to the issues underlying inquiring schools. It will treat such topics such as institutional inertia and change, community and client support for change, management for change, information and decision making, and the politics of adaptation.

Activity C: Develop Products to Support the On-Going
Activities of the Institutional Inquiry Consultant

The role of the Institutional Inquiry Consultant will be that of helping schools make commitments to examine their educational programs, and then to serve as facilitator and guide to members of Inquiry Teams. The teams will be made up of teachers, administrators, students and community people as appropriate, who come together to explore the varying needs and problems within the school. The Institutional Inquiry Consultant will help the team as it explores the range of possible strategies appropriate for solving the problems which the school faces, and to assist the team in implementing those problems into the day-to-day operation of the school. The Northwest Regional Educational Laboratory will develop products to assist the consultant as he guides the operation of the Inquiring Team. It will also develop a field-based training program for the consultants.

Product 1. Manual for Institutional Inquiry

A looseleaf notebook will be developed which describes the theory and application of Institutional Inquiry, and the relationship which must exist between the consultant, the Inquiry Team and the constituent groups within the school which the Inquiry Team seeks to serve.

The manual will contain: (a) A thorough discussion of the theory of institutional inquiry, with emphasis on the goals and purposes of each of the different Levels of Inquiry, according to the Williamson Model of Institutional Inquiry; (b) Guidelines for exercises of inquiry at each of the four different levels of Institutional Inquiry; (c) Information about processes and communication skills necessary

for effective team and consultant functioning; (d) Information about outside resources available to the Institutional Inquiry Consultant.

Product 2. A Presentation Kit

A kit of materials representing the concepts of Institutional Inquiry will be prepared, in a variety of mediated forms, for purposes of explaining the processes of Institutional Inquiry. They will be designed to generate interest in the processes of school inquiry, and to suggest that by following systematic processes of inquiry and through incorporating the services of an outside Institutional Inquiry Consultant, schools can adopt new programs which will help them resolve many of the problems which they are faced with. These changes at the same time will be supported by different school constituencies and have a lasting effect on the day-to-day operation of the school.

Activity D. Develop Products for
Training Administrators

A critical factor in School-Based Inquiry is the attitude of administration toward decision making and change and his administrative ability to organize and manage an inquiring school. The School-Based RFD Strategy requires an attitude as well as role from the administration which is supportive of the change process. The proposed training program is designed to bring about a positive attitude, to help administrators change their roles accordingly and assist them to grow in administrative skills required by such an operation.

Product 1. Models and Guidelines for Organizing
and Managing "Inquiring Schools"

Organized as a looseleaf manual, this document will present information about ways schools can be organized to share in decision making and to engage teachers, students and community members as

well as administrators and support agencies in decisions about school program. It will contain a section on helpful hints for managing Inquiring Schools. It will contain information about effective means for training people to work within such schools.

Product 2. A Design for Setting Up and Operating
a Training Clinic for Rural Administrators

An essential ingredient in the School-Centered RFD Strategy is a clinic for helping administrators assume new roles and responsibilities and acquire new competencies as they manage Inquiring Schools. The clinic will serve an initial training function as administrators commit themselves to enhance inquiring processes within their school; and as they manage Inquiring Schools. The clinic will be the site for an administrator training program designed to develop in administrators such competencies as involving teachers, citizens and students in shared decision-making processes; developing models of cooperative problem analysis, searching for alternatives, selecting and implementing new strategies, and evaluating the impact of new programs; and in competencies necessary for a staff to form inquiring teams. The clinic will also be a place for follow-up information and problem-solving assistance in the day-to-day operation of such a school. It will be a location where assistance in the form of consultation, help, problem-solving capacities and assistance in trouble shooting will be readily available. It will also be a place where embattled administrators may go for succor and psychological support when needed.

Product 3. Kit of Materials
Required for the Clinic

A wide range of materials will be developed which will be useful to administrators as they participate in introductory training and as well as periodic follow up seminar sessions. The materials will enhance problem-solving activities, simulations, and problem analysis techniques, case study materials and other related activities in Inquiry Processes.

In summary, the specific School-Centered RFD strategy is focused upon the creation of Inquiring Schools in rural communities. It is concerned with the development of those educational products needed to guide the organization of inquiry teams, provide these problem-solving teams with resources and skills, train rural administrators and train and support institutional consultants who will help rural schools become responsible problem-solving, self-renewing institutions.

The Learner-Centered Rural Futures Development Strategy

The Learner-Centered RFD Strategy seeks to influence the quality of the learning environment in which rural students receive their formal schooling. In keeping with our overall strategy, our interventions in this arena should focus upon the creation of those conditions that optimize decision making, self actualization and career development on the part of the learner. Also, our principles of change dictate that our strategies be directed toward increasing the capabilities of local people to utilize knowledge and resrouces in creating better learning conditions for rural students.

Application of the model. A person visiting a rural school of the future, as conceived by the Northwest Regional Educational Laboratory's Rural Education Program, would see children engaged in activities far different from those in rural schools of the present. He would discover students engaged in decision making about important aspects of their lives, a means for maximizing their individual potential. Students would be far more mobile and active than he might expect. They would be engaged in activities that they themselves valued--whether because of their intrinsic value, personal significance or extrinsic importance and usefulness to others. Students would be learning in real or near-real settings; learning would regularly take place outside the walls of the school using the rich resources of the rural environment.

The relationship between the students and their teachers would also be strikingly different. Students would be making the critical decisions about their learning goals and objectives and how to accomplish them. The teacher would act no longer as the purveyor of knowledge and wisdom, but as a coach, guide and counselor.

Content would also be construed differently. Rather than assuming that the disciplines contain knowledge that all students must internalize, content would emerge from an assessment of the information students need to carry out their want-satisfying tasks. Content would derive directly from an analysis of what problems people encounter in life and what learning activities are instrumental in solving these problems.

The ideal rural school we envision would have a program of instruction that engages students productively and independently in the systematic and sequential development of important behavior competencies. Such competencies would include the ability to make decisions based upon the

previous experience of oneself and others, to anticipate consequences of alternative ways of behaving, to execute decisions, and to perceive the consequences of one's activities. These competencies would enable rural young people to act positively and purposefully, consistent with their personal goals, as they become competent craftsmen in building their own lives (Hawkins, 1968).

Such a humane and flexible approach to education will place some demanding requirements upon the curriculum, teacher competencies and the operating procedures of the rural school. The curriculum must allow students to pursue goals that are important to them and to efficiently learn what is needed to accomplish these goals; teachers must be capable of providing help that increases the learners commitment to his task and facilitates his instrumental learning while engaged in the task; and the physical setting must provide adequate resources, freedom of movement and a pleasant working environment. We envision, therefore, the following specifications as essential for a learning environment that will "optimize children's capacity to conduct their own learning and to become their own teachers" (Hawkins, 1968).

1. A curriculum that engages students in learning tasks in which:

- He is trying to do something he wants
- He makes real adjustive responses and movements
- The consequences of his responses affect him
- He perceives the effects
- The effects reinforce or modify his conceptual and motor patterns

2. Instructional materials which:

- Allow students to productively pursue a wide range of want-satisfying activities
- Are in the form of small modular units that have captured in intellectually honest ways the phenomena of man's interactions with his environment
- Will accommodate differences in cognitive style and competence
- Permit students to obtain needed competencies and instrumental concepts
- Are adaptable to almost any sequencing that is appropriate to the needs of individual children (Resnick, 1971).

3. Teachers who competently use techniques for influencing learner engagements in these tasks (Woodruff, 1971). These techniques:

- Emanate largely from the task in which the student is engaged and reinforces responsible behavior
- Elicit perception, concept formation, choice of responses, execution of responses, and perception of response consequences
- Keep the student's attention on his task and not on the teacher
- Keep information dispensing and direct control to a minimum.

4. An appropriate physical setting which:

- Permits flexible organizational patterns
- Facilitates student movement to specialized work stations, useful resources and into the real world of the community and out-of-doors

- Provides a variety of specialized work settings
 - Is aesthetically stimulating
5. A working climate marked by:
- Good personal relations
 - Obvious teacher commitment to the work
 - Diagnostic and remedial attention to students as needed
 - Reinforcement of productive behaviors
6. Verbal interaction between teachers and students and among students in which:
- Students do most of the talking
 - The talk is about things they understand
 - Verbal data and information are kept subordinate to concepts and limited to those that are useful in behavior
7. An information management system which:
- Provides students with information they need to locate and retrieve learning resources that are appropriate to their goals
 - Provides teachers with information about each student and the progress he is making toward achieving the goals he has set
 - Provides students with information about how well they are doing in developing the competencies to which they aspire

Critical needs. Unfortunately, education in the rural setting today bears little resemblance to the ideal learning environment of the future described above. The rigid program of instruction which fails to take into account wide diversity in student needs and interests; the curriculum

which inappropriately is patterned after that of the larger urban and suburban schools; the paucity of appropriate instructional materials-- these characteristics of the contemporary rural learning environment highlight the discrepancy between "what can be" in the rural scene and "what is" at the present.

There exists, therefore, a critical need to:

- Guide the development of a more relevant, flexible and humane curriculum for rural schools.
- Provide training for rural teachers in competencies needed to engage students in such learning activities and to provide a supportive learning environment and productive patterns of student-teacher interaction.
- Design new organizational patterns for rural schools that facilitate student movement to needed resources, encourage use of community resources and the natural surroundings, and that nurture individual differences and human diversity.

Selected Learner-Centered RFD Strategies. As with the other RFD Strategies, the Learner-Centered RFD Strategy is focused on the development of educational products that will enable rural citizens, educators and students to create conditions that encourage and support effective decision making. The Learner-Centered RFD Strategies, however, seek to intervene in that dimension of the rural education problem that lies within the immediate learning environment of rural students. To a considerable extent these strategies are extensions and redefinitions of previous strategies employed by the Laboratory's Rural Education Program.

Since 1967 the Laboratory has been developing self-instructional systems for rural schools in an effort to expand the range of learning experiences in small schools. The development of self-instructional systems was initiated in several career education and academic areas. The work on these instructional systems has progressed to the stage that a number of curriculum products have been marketed or are soon to be marketed by the Laboratory.

At the present time the development work on curricular materials can be summarized as follows:

1. Plastics System - being produced for distribution and marketing--
distributor being sought
2. Speech System - being produced for distribution and marketing--
distributor being sought
3. Welding I & II - being produced for distribution and marketing--
distributor being sought
4. Electricity - being marketed by Audiscan Corporation, Bellevue,
Washington
5. Patterns in Arithmetic - being marketed by NIT, Bloomington, Indiana,
and Videosonics, Portland, Oregon
6. Spanish - discontinued (summer, 1970)
7. Physical Science - discontinued (fall, 1969)
8. Math Analysis - in interim product design stage
9. Welding III & IV - in field test

During the summer of 1971 the staff of the Northwest Regional Educational Laboratory's Rural Education Program redesigned its curriculum

development strategies, utilizing the work done in Utah by Dr. Asahel Woodruff on his Life-Involvement Curriculum Model (Kapfer and Woodruff, 1972; Woodruff, 1971a). As a result, one of the Learner-Centered RFD strategies, is to develop prototypic curriculum segments that can serve as guides to curriculum developers and permit local educational decision makers to examine a curriculum alternative that emphasizes decision making, self actualization and career development.

Curriculum

The rural school curriculum of the future, as we have designed it, will be made up of preventures, ventures, carrier projects and units. These curriculum organizing elements allow students to move through the sequential steps of our Generic Learning and Change Process Model as follows.

The preventure allows the student, through such activities as field trips, interest centers, browsing in libraries or observing others, to become increasingly aware of what is possible for him to enrich and improve his life. Most attempts by schools to get students out into the real world are, in our classification, preventures. A field trip to a ski slope, a camping trip, a tour of an experimental range management plot or a visit to a feed mill, a milk processing plant or the water supply facilities are all preventures. They simply bring into the view of the student a piece of the world around him and expands his awareness of what is possible for him and stirs his dissatisfaction with what is. As a result of this kind of experience, he will be encouraged to utilize ventures for more specific study and exploration of his environment in areas where he has uncovered new interests and identified new needs.

Ventures are carefully developed exploratory experiences which give students enough of an understanding of the nature of a particular goal toward which they might work that they can make a legitimate decision whether to pursue that line of activity or not. Students can be helped to engaged in such activities through carefully prepared materials we also call "ventures." A myriad of such ventures ought to be available, enough for a careful exploration of any facet of his environment that catches the interest or concern of the student.

A trip to a ski slope, for example, might result in an interest to explore further the requirements for becoming a skier, running a ski facility, constructing a tow, making snow or the ecological effect of large numbers of people on the mountains in midwinter. In all cases, a venture should enable the student to explore until he can legitimately decide whether to go further or not. The notion of a legitimate decision is fairly straight-forward. It depends on the reasons a student gives for not continuing. If the student can say, "I know what is involved in deciding to get better at skiing, for example, and I don't want to spend my energies doing that--I'd rather do something else," this is a legitimate decision. He could also decide not to go on for reasons having to do with his own strengths and weaknesses ("I've never had very good balance, and skiing takes too much of it.") However, if the student had no realistic conception of what was involved in going on, or made the decision for other reasons ("My friends have all decided to build birdhouses, so I will, too"), the venture was probably poorly designed.

Once a student, through exploring various ventures, has found a goal or direction which he wants to pursue, he develops a line of activity

which will lead to the achievement of that goal or satisfy that want.

This line of activity is called a carrier project. It can be of any length, of varying complexity, and with different levels of performance required for completion. Examples could range from "building a doghouse" to running a slalom course in under three minutes, to writing a newspaper account of the events leading to the voting down of a school tax levy.

The critical feature of a carrier project is that it involves the integration of several specific skills in the production of a definable product. The goal of the student is the end product and learning is instrumental to the accomplishment of the goal--thus the term "carrier" project.

Units are highly efficient instructional packages which give a student a skill or some information he needs, whenever he needs it, to carry out the line of activity identified in his carrier project. For example, headlining is a specific skill for publishing a school newspaper and an instructional program which taught that specific skill would be a unit. Laying shingles for making a doghouse; identification of the individuals to be interviewed for writing the newspaper article; or the "Christie" turn for skiing are all examples of units, if there were specific instructional materials to teach just these skills.

Thus, an orderly sequence of activities for engaging student in productive learning activities is provided by the appropriate use of these curriculum components. Through preventive activities, the students' perceptions of what is possible, interesting and important are expanded. The intent of preventures is to stimulate students' interest. It seeks to bring about a state of awareness so as to lead to subsequent purposeful decision making and learning.

The venture provides the vehicle for pursuing a new interest in somewhat greater detail, and to establish whether or not a student identifies a substantial interest to warrant further extensive activity in this interest area. If not, the student "recycles" to new preventures or ventures, depending on the extent of his interest in the general area. If a student finds a topic, issue or task that is stimulating to him, he then plans a carrier project. Using all of the appropriate resources of both the school and the community, the plan is then put into full operation, and the student is helped to learn from his engagements in the task.

As suggested before, one critical structural characteristic of the carrier project is the unit. Units provide the enabling competencies for successfully completing the carrier project. After completing a unit, the student evaluates the results of his competency building activities in terms of the criteria he himself established as required to complete his carrier project. From this information, he decides what activities to pursue subsequently, whether to develop additional skills or tasks through additional units within the carrier project, modify his plans so that he can complete his project at some acceptable level, or abandon his project as being impractical given the resources available.

Obviously a wide variety and an enormous quantity of curriculum materials will be needed to support such a learning program. We do not, however, as a Laboratory, intend to develop a complete and total educational experience for rural students in all areas of study at each level of maturity. Not only would such an undertaking be beyond the resources of the Laboratory but to do so would be contrary to our notions about how to optimize the capacity of the local community, the school staff and

the students themselves to generate their own perceptions of what an appropriate curriculum would be like.

We can, however, produce examples of educational experiences that succinctly portray the basic principles incorporated into our generic learning and decision-making model. Thus, by developing prototypic instructional systems that contain the necessary ventures and units so that their structure is obvious and explicit, we will be furnishing teachers, students and other curriculum developers with much clearer notions about how to select, modify and develop other curriculum materials that satisfy certain agreed upon critical properties but at the same time suit local goals and individual aspirations.

We plan to develop our prototypic curriculum materials in curriculum areas related to national priorities and with content that lends itself to the development of exemplary materials. The proposed instructional systems will be developed in several content areas, and at each of the gross levels of maturity served by elementary and secondary schools. We estimate the need to develop at least eight prototypic instructional systems. Each of these systems will be a microcosm of a total learning environment and will, therefore, include all of the preventures, ventures and units needed to provide a wide range of options for exploring, identifying wants, and planning and carrying out projects within a clearly defined small piece of the total environment.

We presently are pilot testing an instructional system for primary school art that has been designed to qualify as an RFD prototypic instructional system. This is a content area that is very much in need in rural areas, as few primary school teachers have had specialized art training. As such it serves both to fill a gap in elementary education

and to expand the thinking of the rural elementary teacher about the potential of art education in rural schools. Further, it serves as an excellent example of an open decision-encouraging learning environment in one important area of transaction* with the environment that is appropriate for young children.

In the art system we are developing, there are three alternative paths by which a student can interact with the materials: film loops, sound cassettes, and direct manipulation of art materials. He is free to explore as much as he wishes individually until he has decided he wants to work in some medium. There are a variety of alternative art media available: the system contains six at present but has the potential for many more. The materials for each medium are in a separate container, enabling the student to work individually for as long as he wants. The work of other students of different ages, as well as professional artists, is available for the student to see, and if he chooses, to compare with his own work. (At higher maturity levels, and depending on the nature of the subject matter, the comparisons may become more explicit. For example, in high school welding, an instructional system that is ready for marketing, there is, a "comparison board" which gives actual examples of most welding mistakes. The student only need match his attempt at a particular weld against the comparison board to find out whether he has made an error or not.)

Thus, by providing an option-filled environment in which there are ample materials in the forms of ventures and units; a variety of ways

*Transaction, as used here, is a psychological event in which all the projects of the event derive their nature and meaning from active participation in the event.

for a student to plan and carry out one or more of a number of possible projects; freedom for individuals to work on the activities they choose; and models or "comparison boards" for the student to use in gauging his own work--students can be productively engaged in want serving tasks that encourage responsible decision making and enhance learning. We propose to develop a minimum of eight such systems including the art system described above, to serve as models of the kind of learning environment that would be appropriate and effective for rural students. Also, the NWREL Improving Teaching Competencies Program is proposing to develop a number of units that will be used as elements in one of our systems.

To supplement these prototype instructional systems and further stimulate and facilitate the preparation of more appropriate curriculum materials, the Northwest Regional Educational Laboratory's Rural Education Program will develop detailed specifications and guidelines for developing and/or selecting instructional materials that can be used to create the favorable learning conditions specified by the application of our model as explicated above. Also, a catalogue of carefully selected, currently available curriculum materials, that meet our RFD curriculum materials specifications, will be produced as a further aid to curriculum developers, teachers and administrators.

This cluster of activities and their products together make up the first major part of the Learner-Centered RFD Strategy viz. Activity A: Develop educational products needed to encourage and facilitate the development of a life-integrated curriculum which we have chosen to call the Learner-Centered RFD Curriculum.

Teacher Development

The second major activity, within the Learner-Centered RFD strategy, Activity B, will be concerned with the development of an inservice teacher development program through which rural teachers can grow in their competencies to engage students productively in the kind of curriculum discussed above. Such a program will need to be specially designed to operate effectively under the conditions of remoteness, isolation and small size that characterize the rural setting. Also, in keeping with our commitment to field-centered, learning-while-doing, approach to training, the teacher development program must be designed to satisfy the requirements of this approach. (See page

The teacher competencies that are the objectives of this RFD teacher development program have been rationally derived from the teaching behaviors or actions by which a teacher establishes and maintains the four conditions essential to the operation of an RFD-type learning environment. These conditions as spelled out in our Generic Learning and Change Process Model are:

1. The person is doing something to satisfy an objective that is important to him
2. He is doing it in a real situation, to real things, on a for-keeps basis
3. The person acts overtly and verbalizes in response to, or as a result of, overt actions
4. What he does involves a full cycle of behavior:
 - Perceiving
 - Thinking and conceptual organizing
 - Choosing a goal and a line of response

- Carrying out his choice and thus precipitating a consequence
- Being affected by the consequence, and re-entering the cycle by perceiving some or all of those consequences

The teaching behaviors necessary to the creation of these conditions for learners, which are the objectives of the teacher development program, have been identified by Woodruff (1971b) as follows:

Engaging students in life-relevant, want-satisfying learning tasks.

In this role the teacher behaves toward students much as the community change agent behaves toward the community he is seeking to help. Through the use of preventive activities student interest in his environment and the nature of his transactions with it is stimulated. Teachers plan with students a wide variety of such engagements through which each student is encouraged to investigate further a concern, or an interest that was generated as a result of the preventive experience. A file of ventures then permits students to investigate further these areas of interest (or concerns) until the student finds something he wants to construct, carry out, learn about or influence. He is then helped by his teacher to plan a project, identify and secure the needed resources and carry out his project to its appropriate conclusion.

The steps are similar to the eight steps in the Learning-Change Process Model and are the logical steps for engaging students in want-satisfying carrier projects just as they are appropriate for engaging communities in community improvement projects. To perform effectively in this role, teachers need familiarity with the nature of each step in the decision-making process and skill in encouraging participation, helping students acquire needed process skills, and competence in reinforcing active, responsible participation on the part of individual students.

Eliciting responses to the tasks that increase perception, build concepts and encourage decision making. This consists of the use of influence devices which emanate largely from the environment with which students are interacting, and which elicit from them such responses as perception, thinking, making decisions, executing decisions, and perceiving the consequences of their responses. When the teacher steps between the learner and his interactive environment, and in place of those environmental influences dispenses verbal information of various kinds or uses response-control devices on students, he engages the student in a student-teacher interaction rather than a student-environment interaction. This not only interferes with natural learning, but usually produced one or more inappropriate reactions from learners, ranging from meaningless verbalistic behavior to antagonistic resistance.

Maintaining a climate which enhances commitment. The climate for learning in a school is a function of five social factors: good interpersonal relations, contagious vitality of teachers toward both learning and children, diagnostic and remedial attention to each student, continual reinforcement by the teacher of productive student behavior, and individual and institutional commitment to student learning. All factors relating to climate are important to effective student learning, but commitment is, perhaps the most critical. The atmosphere of commitment is that which suggests that all resources of the institution--human as well as material--are dedicated to support and encourage positive self-actualizing student activity.

Maintaining a verbal and conceptual balance in the use of verbal communication with students. In short, behavior can be changed most effectively when students do more and more of the talking, when they are

talking about what they know conceptually, and when any verbal information they obtain is intimately related to the concepts they are acquiring and is necessary to the thoughtful use of those concepts in making decisions. Under the opposite conditions, verbal activity can destroy thinking, interfere with conceptual activity, degenerate to laborious memorization of information, and swing back to a teacher-dominated ratio with passive and bored students.

The Northwest Regional Educational Laboratory's Rural Education Program proposes to design a teacher development program that will meet the above specifications and enable rural teachers to acquire the competencies they elect. The program will be designed to create the four general learning-facilitating conditions and employ the eight-step change process as its strategy for engaging teachers in a program of self development. The following training sequence is an illustration of the kind of training program we will develop for rural teachers.

The rural teacher development program will be centered within local clusters of rural schools served by a network of service centers (see Section II for a more detailed description of this structure). The cluster service centers will initiate and manage the teacher development program and establish and operate the "training centers." The training centers will not be identified with a fixed single location or building but with a coordinated, continuous program, providing in a flexible manner, resources, feedback, and assistance to a diverse and scattered teacher population.

The teacher development program for groups of up to twenty teachers at a time will begin with a two-week summer session at a training center. This two-week session will provide the kinds of interaction and

transactions that build awareness of the possible teacher roles and competencies that will enable teachers better to serve their students (preventures). This activity would be followed by opportunities for individuals or small groups of teachers to explore any number of these newly perceived possibilities (ventures). Whenever such "venturing" results in a decision on the part of a teacher or a group of teachers to pursue some specific self improvement goal(s) they will be assisted in planning a sequence of activities that will enable them to reach their goal as they worked with students during the coming school year (project). The development of the self improvement plan, and identifying, locating and arranging for the resources needed to carry out these individual teacher growth plans will be the major activities that would go on at the center. During the interim between the summer training session and the beginning of the school year these plans will be continued and culminated in readiness for recycling another year.

The extension of the summer program into the school year will follow the following general sequence: Each teacher will follow his plan by practicing behaviors related to his goal and engaging in instrumental learning related to these behaviors. Specially prepared materials will help each teacher acquire the skills and concepts needed for these behaviors. The instructional systems developed by the NWREL Improving Teaching Competencies Program, especially TPIM and RUPS, and the Far West Laboratory's minicourse will be included in these materials.

Learning will be facilitated by a number of feedback and monitoring strategies and devices. A telephone service will enable the teacher to consult regularly with support staff at the Center. Itinerant staff will visit the teacher on call, and/or schedule, and help him perceive

his progress and solve problems related to his "project." Mobile video-taping capabilities will enable teachers to tape and critique their own performance or by mailing the video tapes to the center they could have them critiqued by a Center staff member.

During the school year some two-or three-day sessions at the Center will enable the teachers, who are engaged in projects of self development, to get together with the Center staff for the purpose of sharing experience, improving their project plans, and renewing their mutual commitment to self improvement.

These kinds of activities will continue throughout the school year, and then during the summer. Another two-week summer session will allow these "trainees" to assess their progress, explore new avenues of self improvement and plan new projects.

Learner-Centered RFD Products. The Northwest Regional Educational Laboratory's Learner-Centered RFD strategies are designed to provide rural school systems with the capability for managing curriculum development, training rural teachers and organizing flexible learning environments for rural students. The following products will be developed as the major means for carrying out these strategies.

Activity A. Develop Learner Centered RFD Products That
Act As Models to Encourage and Facilitate the
Development and Use of RFD Type Materials

Eight prototypic learning systems that contain closely related sets of ventures and clusters of learning units that can be utilized in generating and carrying out to achieve goals of a carrier project related various areas of life's transactions.

Activity B. Develop Products That Enhance Local Capacity To
Locate and Develop RFD Type Curriculum Materials

- A Developer's Guide to the production of RFD type curriculum elements.
- A Search Guide that will help local education locate RFD type curriculum materials.
- A catalogue of existing materials that satisfy the definition and specifications for RFD units.

Activity C. Develop Products That Help Rural Teachers Acquire
Competencies that Complement the RFD Learning Environment

- A School Administrator's Guide to the Learner Centered RFD Teacher Training Program.
- A Training Center Operations Manual.
- A Program Syllabus for the RFD Teacher Development Program.
- A core set of materials needed by the Center and the Program:
(1) Laboratory developed RFD materials--summer workshop materials; instructional learning materials (units) and instruments for assessing progress; and, (2) A catalogue of existing appropriate materials including many of the NWREL's Improving Teaching Competencies Program instructional systems.

Activity D. Develop Products that Enhance Local Capability to
Organize Flexible Learning Environments for Rural Students.

- An Information Management System Guide for rural schools.
- A Guide to Inexpensive Facilities Remodelling to increase flexibility and create specialized learning spaces.
- A Guide to the Identification and Use of Community Resources in small rural communities.

Following is a more detailed description of each of these products, together with their specifications, as far as they have been developed. The development of more explicit specifications for the teacher training system and the prototypic curriculum materials is a major inclusion in the present activities of the Northwest Regional Educational Laboratory's Rural Education Program.

Activity A. Develop Prototypic Instructional Systems
As Models For Curriculum Development

In selecting the content areas in which we will develop the prototypic instructional systems, we employed five criteria: (1) related to national priority, (2) lend themselves to the development of materials that exemplify the structure and critical properties of the RFD curriculum concepts, (3) harmonize with the observed behaviors of children at work and at play, (4) represent a cross-section of maturity levels and transactional areas, (5) are within the capability of the Laboratory to develop.

By applying these criteria we have identified eight prototypic instructional systems we propose to develop or finish developing over the next five years as the minimum needed to adequately exemplify the kind of curriculum materials we think are needed.

1. Finish the early childhood Art system (Grades K-3).
2. Finish the Math Analysis system (Grades 10-12).
3. Develop a childhood Art system (Grades 4-6) based on the prototype products already designed by the Rural Education staff.
4. Design and develop a rural environmental study system that includes ventures and units related to such issues as stream pollution, the use and control of insecticides, fertilizers,

range management and watershed protection, management of timber and mineral resources, preservation of natural beauty, etc.

5. Design and develop a career planning or search for a meaningful future system that is scientifically sound, has easy access to needed resources and desirable affects. We will utilize some of the products developed by John Holland at the Center for Social Organizations of schools; John Hopkins University. The system will contain:
 - self-directed units for young people whose personal development is relatively normal
 - consultative units for young people whose career planning problems are such that they need help in looking at more alternatives
 - personal development units that will provide additional experiences to help young people obtain clearer pictures of their interests, abilities and personality--especially how these personal characteristics are translated to careers.
6. Design and develop an interpersonal relations development system for young adolescents that would permit young people of junior high age to acquire the competencies they desire, related to getting along better with friends, family, adults and authority figures. The Improving Teaching Competencies Program of the Northwest Regional Educational Laboratory intends to produce 50 minipackages on basic interpersonal issues experienced by young learners. Such topics as "Letting Yourself Be Helped," "Checking For Understanding," "What's True About You," are samples of units already in exploratory stages of development. Our intent is

to cooperate with Charles Jung and Gary Boyles to extend the development of these minipackages and create 25 more that are unique to learners in a rural environment as determined by our observations of rural youngsters. They would focus in the early adolescence level of maturity and in the self-transactional areas.

7. Design and develop an "analysis of values" system for high school age young people. This system would allow young people to engage in tasks necessary for the formulation of rational value judgments and for the resolving of value conflicts. Many of the procedures that would be reflected in the ventures and units to be included in this learning system are contained in the 1971 Yearbook of the National Council for Social Studies and in the work of Professor Donald W. Oliver, of Harvard; and Fred Neumann of Wisconsin, as found in the Unit Books Series published by American Education Publications. The units would be developed around such phenomena as identifying and clarifying value questions, assembling purported facts, assessing the truth of purported facts, clarifying relevance of facts, testing the acceptability of a value principle, resolving value conflicts due to differences in interpretation, differences in purported facts, differences in clarifying the relevance of facts and differences in testing the acceptability of value principles.
8. Design and develop a community studies system for children of junior high school and high school ages that would focus upon helping rural youth gain a sense of stewardship for the community health of their hometowns. This cluster of learning

units is designed to use with carrier projects whose goals preclude analyzing, measuring, examining, synthesizing and evaluating the "good" or healthy community and the current state of the learner's community. Ancillary units in reporting findings and conclusions to community groups will be included. Determining community social indicators as an aid to "charting" community health over a period of time will be the focus of the units. Learner's either individually or in groups, will be able to choose and order the units to their (the learner's) purposes.

Objectives of the RFD Curriculum Materials. The purpose of these Learner-Centered RFD Curriculum products is to facilitate the development of curriculum materials that facilitate the actualization of the learner's ability to make wise decisions related to his self-realization and career development. Self-direction, individual responsibility and functioning at higher levels of human operation have been described as the conditions necessary to the development of a flourishing human being.

Therefore, the outcomes expected for the learner from the use of Learner Centered RFD-like curriculum materials are:

1. Self directing behaviors that are the result of identifying, examining and choosing goals, selecting and using processes to achieve these goals, using learning to improve knowledge and competence, and evaluating the consequences of the self directed behavior.
2. Identifying and analyzing behaviors with which the learner identifies, examines and deals with the significant issues in his life.

3. Behavioral familiarities with phenomena in the transactional areas of the environment.

Activity B. Develop Products That Enhance Local Capacity
To Locate and Develop Curriculum Materials

Three types of materials are planned for this activity: A curriculum development guide, a curriculum materials search guide and a catalogue of existing "units." The need for these materials comes from the realization that many innovative programs fail for a lack of materials for learner use. The purpose of these products, therefore, is to support the development and identification of the large quantities of RFD type curriculum materials that will be needed as rural schools desire to implement this kind of curriculum. They are also consistent with the RFD principle that decision making should be close to (so that it can be influenced by) the people being affected by the decisions.

The Guide to RFD Curriculum Materials Development will be designed to place into the hands of curriculum developers, especially those closest to the local scene, the capability to produce materials that meet specifications and at the same time take into account local needs and local resources.

The Search Guide will provide a systematic procedure for locating, screening, coding and filing those existing curriculum materials that satisfy the criteria for "units" and meet local needs as well as those materials that can be used with only minor modifications. The implementation of the materials search procedures together with the use of the catalogue of materials will enable a local school system to obtain a beginning supply of appropriate materials without a great deal of effort.

The catalogue will be used by learners, teachers and administrators to select learning units necessary to the goals of carrier projects. The sources and prices in the catalogue makes it a valuable tool for supplying the operating curriculum.

Activity C. Develop Products That Enhance Local
Capability To Train Rural Teachers

As mentioned earlier, this cluster of products will enable local school districts, individually or in cooperation with neighboring districts set up and operate a field-centered, inservice teacher development program for a cluster of rural schools. Four products or sets of materials have been identified as those necessary to provide local educators this capability:

1. A school administrator's guide to the Learner-Centered RFD Teacher Training Program.
2. A Training Center Operations Manual.
3. A Program Syllabus.
4. A core set of materials needed by the Center and the Program.

Product 1. The Rural School Administrator's Learner-Centered
RFD Teacher Development Guide

The purpose of this publication is to enable rural administrators and local school board members decide whether or not to adopt the NWREL's Learner Centered RFD Teacher Development Program, and to provide a set of procedural steps to follow if the decision is to adopt it. A tentative table of contents should include the following:

- Deciding to adopt the program, concepts, program structure, organizational structure, staffing consideration, facilities and material consideration and time and cost consideration.

- Procedures for adopting the program, presenting and gaining approval for establishing the program, sequence of events for implementing the program, job descriptions, and staff selection procedures for staffing the program, assigning administrative responsibility, establishing accountability requirements and procedures.
- Managing the program, program specifications, operating procedures, recruiting participants, how to arrange for and use incentives appropriately, personnel management procedures, resource management guidelines.
- Renewal considerations, program maintenance, evaluating cost effectiveness, feedback.

Product 2. The Training Center
Operations Manual

This publication will provide the center manager with a set of concepts, principles, guidelines, models, checklists, and procedures for managing the operations of a training center that has as its mission the support of the kind of flexible teacher development program described above. In the manual the function's of the Center will be analysed using function analysis techniques and operational requirements will be generated using synthesis analysis. Guidelines for management by objectives and shared decision-making will also be included.

Product 3. The Program Syllabus

The Program Syllabus will be a detailed presentation of the Learner-Centered RFD Teacher Development Program. It presents in detail the sequence of training events from the "preventure"

experiences at the beginning of the summer workshop through venturing, setting goals, choosing appropriate learning tasks, planning a project, carrying out a project, scheduling and utilizing resources, monitoring and assisting trainees, evaluating progress and selecting a new set of goals.

Product 4. A Core Set of Materials

These materials will be of two kinds: (1) those developed by the Laboratory, and (2) those existing materials identified by the Laboratory as relevant and worthwhile. A catalogue of these latter materials will be developed by the Laboratory. A number of the training systems developed by the Northwest Regional Educational Laboratory's Improving Teaching Competencies Program will be described in this catalogue.

The materials to be developed by the NWREL's Rural Education Program will be those needed by the Program but which are not now in existence or being developed elsewhere.

A grid of the units, ventures and awareness materials required for each competency covered by the Program will be constructed and used to identify gaps between existing material and those needed to operate the Program.

Objectives for the Teacher Development Program. In designing the RFD Teacher Development Program, the role of the teacher has been redefined from the familiar traditional role. The overarching fact is that a learner is his own teacher. He learns as a result of what he does, not what the teacher does. The teacher sets up a learner arena, he does not educate children. He enables them to educate themselves.

He activates students in the autonomous learning processes, he monitors and guides their behavior practice as needed, he supports them with a facilitating climate, including enough behavior management to establish responsible behavior in the learner.

The teacher establishes a working climate that is charged with commitment and which allows students freedom of movement to specialized learning spaces, both in the school and into the community, and to a wide variety of resources in the form of people and materials.

The teacher interacts with students in ways that keeps their attention focused upon the task--not the teacher--and that elicits responses from students that increase their perception of what is taking place as a result of their actions. He behaves in ways that express his commitment to the students' goals and activities and maintains a verbal/conceptual balance that increases the student talk in the direction of improved conceptualization.

The five objectives, therefore, of the Teacher Training System are as follows:

1. The teacher will be able to engage students in goal-pursuit transactions with their real environment. The transactions should involve significant behavioral competencies and should be provided under conditions that improve the students' ability to perform the behaviors.
2. The teacher will be able to select and use influence devices that elicit student responses to learning tasks, and keep them focused on those tasks and not on the teacher.

3. The teacher will be able to maintain an effective working climate and secure effective student commitment to the carrier projects and other tasks.
4. The teacher will be able to use verbal interaction for maximum gain in task-achievement by students.
5. The teacher will be able to assess the effectiveness of his work and improve it on the basis of his evaluation.

Activity D. Develop Products That Help Rural Educators Organize Flexible Learning Environments For Rural Students

Within the experience of innovative rural educators are some great ideas for organizing classrooms, remodeling traditional school buildings, providing specialized learning stations and utilizing community resources. These innovative ideas are scattered throughout rural America. We propose to pull them together and add to them a few of our own and develop from there three publications:

1. A Guide to the Development of an Instructional Information Management System for small rural schools.
2. A Guide to Inexpensive Remodeling to increase flexibility and create specialized learning spaces.
3. A Guide to the Use of Community Resources in small rural communities.

The ideas contained in these publications must be inexpensive, be within the capability of rural school systems to accomplish, and be highly practical. Following is a description of the proposed contents of these products.

Product 1. An Information System for Helping Manage the Use of RFD Type Learning Materials

The RFD Learning Environment requires an information system that facilitates the retrieving (as well as filing and replacing) of curriculum elements, both mediated and experiential, on an individual learner basis. The information system must allow easy access for inventoring, up-dating and replacing curriculum items. Information about who is using a particular curriculum item is necessary for monitoring, describing and reporting student activity and is important to operational decisions in school operation.

Information about student progress and level of achievement is helpful to students in assessing the consequences of their actions and useful to teachers in providing appropriate help. The product we propose to develop will be in two parts: One is the actual physical pieces of the system in the form of a model that can be seen and adopted. The other is an easy-to-up-date manual that contains:

- Rationale and Purposes
- Coding the System
- The Procedures of each Component of the System
- Operational Suggestions for each Component
- Administering the Information System
- Evaluating Operating Effectiveness

Product 2. A Guide To Inexpensive Remodeling For Improving Learning Conditions

Nearly every small rural community has a sizable capital investment in a school plant. The school buildings were built to be functional under a set of assumptions and conditions that are

much different from the RFD operating principles. The Guide to Inexpensive Remodeling is designed to help local community and school people make reasoned decisions about changing existing school plants to accommodate RFD learning activities. The Guide would focus upon:

- The relationship of physical surroundings to learning activities
- "Stage settings" for various types of learning activities
- Analyzing learning activities to meet space, traffic and building equipment needs
- Analyzing existing structures for RFD requirements. (Both on and off the school campus)
- Deciding on the changes needed
- Some inexpensive easy-to-use remodeling hints
- Using architects and other consultants effectively

Product 3. A Guide to Finding and Using Educational Resources in Small Communities

Every community has educational resources that are not developed and utilized by the local schools. The resources include both physical and natural phenomena and people willing to share and teach their experiences and skills. Using these resources means greater diversity for learners, more low-dollar cost resources for the local school, and bridging the generation gap or reintegrating of the "generations" within the community.

Verbal and academic oriented schools look at using community resources as "frill" activities. RFD educational experiences are designed to utilize local resources.

This Guide is designed to help students, teachers and other community members organize an effort to canvass their communities, to identify the educational resources it holds, and to contact the people that control the resources to gain their cooperation. This Guide will also contain suggestions for establishing learning conditions, making the experience valuable to both the learner and the resource, and evaluating the experience for each vested interest.

The Guide to Finding and Using Local Educational Resources is expected to be organized as:

- The Case for Utilizing Community Resources
- Identifying the Resources in your Community
- Establishing Learner Conditions Utilizing Community Resources
- Problems and Suggestions
- Evaluating the Experiences
- Describing and Reporting Learning to Parents, Resource People and the Community
- An Annotated Bibliography

Support Agencies-Centered RFD Strategy

The Support Agency Centered RFD strategy is aimed at helping state educational agencies and intermediate districts provide the kind of leadership and services to rural school districts that increase their capability to initiate and carry out systematic programs of educational improvement. It proposes to intervene mainly at the field consultant level, i.e., those services provided by these agencies by having personnel in the field.

Application of the Model. In addition to these three applications described above, the model requires that a specific kind of relationship exist between the school systems that operate rural schools and the agencies that have regulatory authority and leadership responsibilities for them. It is important that state education agencies, intermediate school districts and teacher training institutions support the concept of local control that is encouraged by the local applications of the Generic Learning and Decision-Making Model. The regulatory posture of some of these agencies would need to give way to a new type of leadership and service role.

Following is a list of functions that would characterize these new roles:

Leadership Functions

- Provide and apply incentives for local education agencies in the form of accreditation, program approval, supplementary funds, publicity that is successful in involving citizens and engaging their school staffs in the Inquiry Process.
- Provide competent technical assistance to rural communities in identifying broadly representative opinion leaders, organizing these representative citizens into a community team and training them in processes and skills needed for productive involvement in solving local problems.

Service Functions

- Provide information linking services that enable local problem solvers to obtain the information needed to analyze local problems, generate alternative solutions and install selected new programs.

- Provide training resources to help local districts and communities obtain the new skills and competencies required by their school improvement plans.
- Provide consultants who can help local citizens and educators solve the technical problems involved in solving the problems they have chosen to work upon.

It would be foolish indeed to treat a rural school system as if it existed in a vacuum. The rural school system, like all other school systems, and, as has been pointed out earlier, many of the decisions affecting its operations are made outside of the local environment at the regional, state and national levels. For example, in most states, local school buildings must meet state specifications, teachers must satisfy state certification standards, the curriculum must conform to state curriculum standards, the textbooks must be selected from a list of "adopted" textbooks. Local school boards are limited in their authority to operate schools by state statutes; and many teachers, because of membership in teachers' associations and unions, are persuaded to conform to association policies in several matters relating to the nature of their professional services. Most often this network of systems is so balanced that it acts to depress the probability of change occurring in a single system, particularly if that single system is small and relatively powerless. The danger, of course, is that change programs will be attempted in some of these single, small rural school systems without sufficient reference to the external forces operating on those systems.

One of the most influential of these external forces, especially with small rural school systems, are the state education agencies.

And perhaps no component within the entire educational system has a better chance of helping to provide an improved environment for change than do state education agencies (Morphet, Jesser, Ludka, 1971).

This is the case for two reasons: (1) they have a de jure leadership role that no other component of the educational system has; and (2) for a variety of reasons, they are in a strategic position to develop or help to develop a new set of internal subsystems.

Of growing influence in rural areas are the merging intermediate regional service districts. Whether intermediate districts are extensions of state education agencies or cooperatives formed by clusters of small districts they promise to exert an increasing amount of influence upon rural educational improvement.

The crucial fact is that neither state education agencies nor intermediate districts are in a very strong position to mandate or dictate change. They are, however, in an excellent position to encourage and facilitate change.

Critical Needs. Given the emphasis the Laboratory's model places upon local initiative, grass-roots participation, self-actualization and self-renewal, and understanding in the nature of existing relationships between support agencies and rural school systems, it is apparent that those agencies that provide leadership and services to rural districts will need personnel who possess the attitudes and skills that are favorable to change and that enable them to encourage and support the proposed processes in the local school systems with which they work. In many instances a change in posture toward their clients will be required and current staffs will need to be trained in some new competencies.

The following chart illustrates some of the more significant kinds of emerging role relationships in contrast with more traditional roles if state education agencies and intermediate districts are to be effective agents of change.

<u>From</u>	<u>To</u>
1. Furnishing program ideas to client's district	1. Furnishing procedure ideas for solving program problems
2. Indoctrinating others with your ideas	2. Building the capability of others to generate ideas
3. Manipulating clients with incentives and authority to adopt pre-determined solutions to their problems	3. Helping clients identify, analyze and solve their problems in ways that are satisfying to them
4. Providing support and services only to those programs that conform to national, state or regional standards	4. Providing support and services to locally generated solutions
5. Supervision for the purpose of enforcing standards and encouraging conformity	5. Supervision that builds independence, strengthens the capability of those involved in operations and encourages diversity
6. Being a purveyor of the letter of statute laws	6. Being an enabler who points out options for good programming for students available under the law

These new relationships suggest the kinds of competencies that will be required of those who will provide consultant services and technical

assistance to those districts that are moving toward community and local school-based decision making in educational improvement. Skill in helping others is the key competency required by this emerging role. Its aim is to increase the independence of citizens and educators, at the local school district level, in identifying problems and in planning and carrying out improved educational practices. It is assumed that this help can best be given in an ongoing, side-by-side relationship. The skills needed for this kind of relationship are different and specialized. They consist of such areas of competence as: "How to make entry." "How to facilitate communication." "How to observe and provide feedback." "How to use questioning as a technique for helping." "How to encourage more thorough problem analysis and systematic planning." "How to guide clients to utilize resources, both within and without, such as consultants, information systems, promising practices, etc."

Selected Strategies. The Laboratory proposes, therefore, to develop a training system that will help field service consultant acquire the concepts and competencies needed to perform the following tasks:

- Help client districts exercise initiative in identifying and solving local tasks
- Program improvement of problems
- Help client districts search for and examine alternative solutions to their educational problems
- Help client districts turn concerns and dissatisfactions into usable problem statement
- Help client districts understand and exercise fully the options available under existing statutes and standards

As with the other training programs being developed by the NWREL's Rural Education Program, the training program for field consultants will be an in-the-field training program. Consultants-in-training will learn their new competencies while engaged in performing consultant services in rural school systems. The proposed design, therefore, combines field-centered training, competency-based or performance-based assessment and systematic instruction as described in the introduction to this section.

Support Agencies-Centered RFD Products. The development of the Laboratory's training system for these consultants will also be field-based, i.e., it will be developed and tested in the field, hopefully in the same sites (a cluster of rural schools) where the other interrelated products are being developed. The training system will be developed for use by institutions and agencies that may wish to offer this particular brand of training. The system will include the following products:

1. A trainer's manual that contains:
 - Overview and rationale
 - Selecting training sites and, identifying and arranging learning experiences for trainees
 - Recruiting trainees
 - Trainee monitoring
 - Training materials for training staff and trainees
 - Program procedures
 - The operation of a training site--structure of a training site and instructional mechanisms

- A Trainee's Handbook for use in training
- A Consultant's Field Book, i.e., a looseleaf collection of carefully selected materials that would be helpful in the field

In summary, the Support Agencies-Centered RFD Strategy is designed to satisfy the needs that rural school districts have for help from state education agencies and intermediate districts of the kind that increases the local capacity to identify, analyze and solve local educational problems. They need access to information, they need training in new skills of planning and decision-making, they need help in identifying and utilizing resources both within and outside the local school district, and above all they need encouragement, freedom and confidence.

The Relationship Among the Four RFD Strategies

These four strategies were selected because they get at those dimensions of rural education that have the most direct effect upon the formal schooling opportunities for rural students. Together the four strategies provide a reasonably comprehensive approach to the problem. It is the intent of the Rural Education Program that these strategies be employed together and in concert so that the full impact of their mutually reinforcing characteristics can be felt in a cluster of rural school systems and communities.

The interrelationships that exist among these components is illustrated in the concentric circles on the accompanying diagram (Figure 7). The fifth component, or concentric circle, that has been inserted between the immediate, in-school, learning environment of

Component III and the school system environment of Component II is placed in this proposal as an optional component. The strategy proposed in this optional component would focus upon the family that provides so much of the out-of-school learning opportunities for children, especially very young children. The home as an institution would be linked to the school and the community, forming a trio of institutions that share the responsibility for providing an affective learning environment for rural students. The strategy for influencing this segment of the rural environment is the Family-Centered Rural Futures Development Strategy. A full description of how this strategy will be developed, the products that would be developed and packaged to help rural parents improve learning opportunities in the home and the resources needed to develop these products are presented as an optional addendum to this proposal.

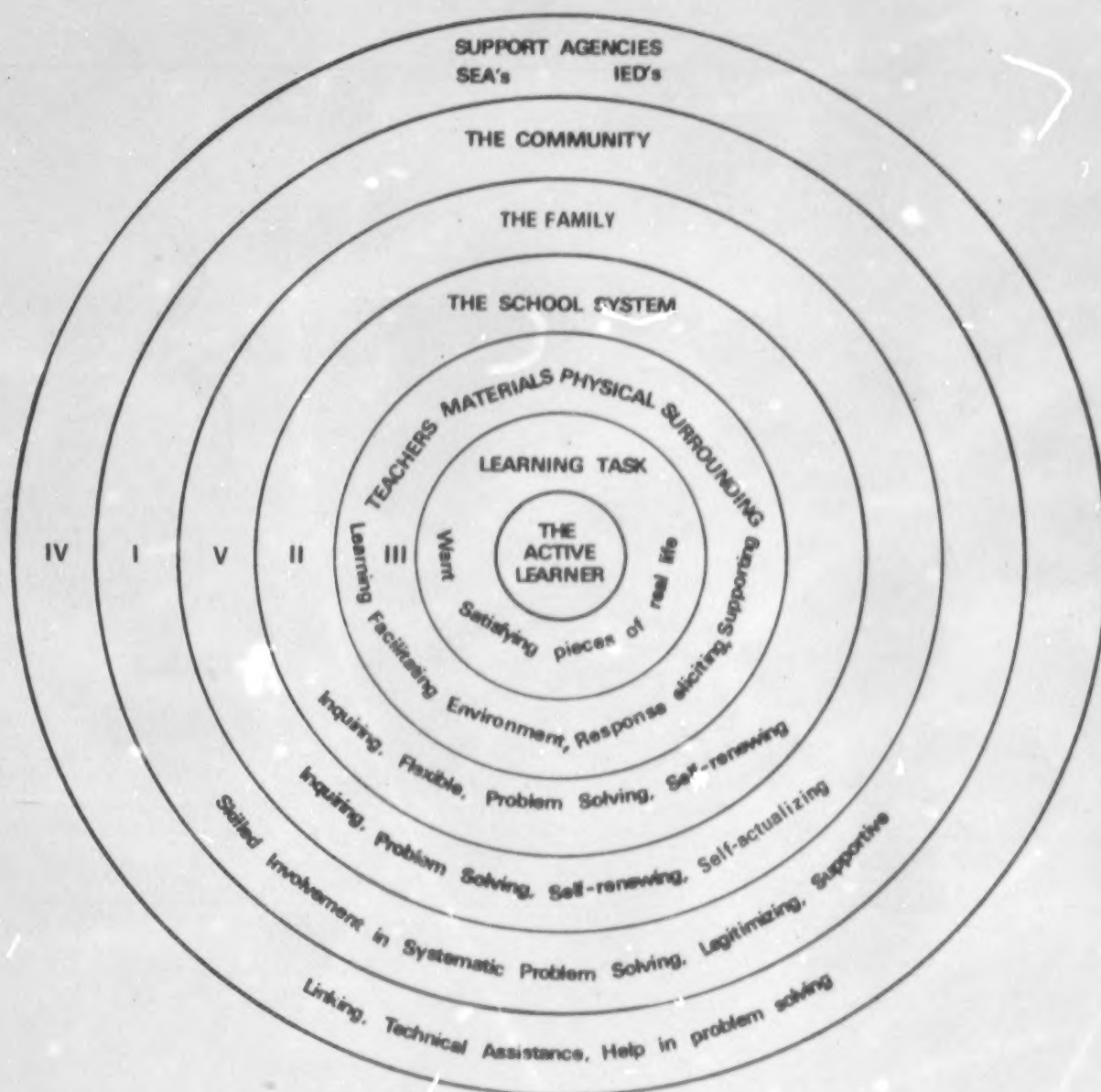


Figure 3. THE RELATIONSHIPS AMONG THE FIVE RFD STRATEGIES

ADDENDUM

The basic program plan proposes four interrelated strategies that are consistent with a general strategy for helping rural citizens and educators develop the capability to initiate and carryout a comprehensive program of educational improvement. These four strategies constitute a minimum set of strategies required to create the kind of critical mass of effort and commitment needed to break the strong bindings of inertia that tend to perpetuate the status quo. The rural family, however presents another segment of the total rural educational environment that begs for attention. We have therefore developed this fifth strategy, or program component, as an addendum to our basic program plan which provides a defensible option if additional rural educational improvement activities can be funded.

The Family-Centered Rural Futures Development Strategy (Optional)

A thesis of the Northwest Regional Educational Laboratory's Rural Education Program is that the release of human potential and institutional renewal are interrelated processes. Previously in this document we focused our Rural Futures Development Strategies--our strategies for unfolding the potential of rural people and their institutions--upon the rural school and the rural community. A third institution that functions even more significantly as a framework for the actualizing of human potential is the rural family.

The family is the most basic of all of our institutions. It powerfully affects both the individual and his society. During the child's most formative years, his home and his family make up his world.

The family is the unit of which society is made. Society depends upon the family to satisfy the basic needs of most of its non-adult members. Society's future leaders or future troublemakers are being shaped in families today. Thus the welfare of society is chiefly determined by the quality of family life.

It has been asserted that the countryside is the natural habitate of the family. In other words, the family in rural areas enjoys an optimum opportunity to fulfill its potential. The relative isolation of rural families from each other, makes it possible for the members of the family to work, play and pray together without numerous interruptions. Children in rural families have opportunities to feel needed when they can participate in planning the family enterprise, share in the family chores and contribute to the family income. Rural fathers and mothers have more opportunities to visibly model their differentiated parental roles than do urban parents where family members frequently only see each other at mealtime. And, the rural family has the opportunity and compulsion to provide more education, cultural and recreational experiences within the family unit.

However, the rural family life is being threatened by declining employment opportunities, mass media, improved roads and transportation and increasing penetrations by man's society. Even if they should, these technological advancements cannot be halted. But the values of rural family life and its opportunity for unfolding the potential of its members can be preserved, even in a mass society that increasingly presents the rural family with influences and distractions not too different from those confronted by urban families.

The challenge is to provide rural families with the capability to be self-renewing and the resources necessary for creating a self-enhancing environment for its members.

Like rural schools, rural families lack the resources and skills to provide a rich learning environment in the home for preschool aged children as well as for children who are regularly attending school. The sparsely populated rural setting has had the effect of making the traditional approaches to early childhood educational and parent training impractical. As a result there are few rural Head Start programs, kindergartens or nursery schools, and programs for effective parenthood are seldom found in rural communities. Many children who grow up in rural areas have their first exposure to working with instructional materials that develop cognitive, affective and psychomotor skills at age six or seven, when they initially enter school (People Left Behind, 1967).

This presents a serious problem. Coleman (1967) found that none of the school characteristic variables are as strongly related to school achievement as home background conditions. It is generally agreed that family life and what a parent and child do together at home is an important factor in school achievement. Lavin (1965) concludes, after reviewing a number of studies of the relationship between home life and school success, "The general picture that seems to emerge is that the student who does well in school comes from a family with a relatively small number of children, the parents exhibit warmth and interest, where the child has a relatively high degree of power in decision making and where the family is able to arrive, with relative ease, at consensus regarding values and decisions."

The evidence strongly suggests the need for making the home a healthy and healing environment for children. The rural setting should not be allowed to be an obstacle that denies rural children from benefiting from a rapidly increasing number of successful programs designed to give young children a supportive home environment in which they can develop fitness in physical, emotional and mental growth. Rural children, too, should have Sesame Street, the Far West Regional Educational Laboratory's Toy Lending Library, Electric Company and other early childhood education products commonly available in urban communities. Rural parents, too, need help in the form of training in techniques and appropriate materials for engaging their young children in self-actualization and a sense of personal worth and autonomy.

The problem, then, seems to be two-pronged: (1) to provide rural families with the capability to be both self-renewing and inquiring; and, (2) to generate in rural parents the capacity to improve their parental effectiveness and create an enriched, stimulating learning environment in their homes for their own children.

Application of the Model. As with the other strategies the application of the basic principles of learning and change to the home environment will enable us to define an ideal set of conditions for renewal and learning, identify critical needs and design strategies that are appropriate to satisfying these needs.

An emerging body of literature suggests that the family as an institution does, in fact, contain the potential for solving the problems it is confronted with. An increasing number of psychologists are developing techniques for resolving difficulties through a problem-solving mode of inquiry (Dreikurs, 1964; Ginott, 1965 and 1969; Gordon, 1970;

and Harris, 1969). These applications, however, all refer to procedures for resolving interpersonal conflict, probably because of the view that a degree of family harmony is essential for members to expand their potential. Thus, ways must be developed to resolve family conflict before family potential can be realized.

However, no theoretical reason exists why problem-solving skills in the area of interpersonal conflict cannot apply equally well to other issues. Families could engage in processes of inquiry, for example, about interesting new ways to improve the physical environment in which they live, both in terms of physical comfort and cultural and aesthetic values. They could explore alternatives for family recreation and entertainment. They could engage in problem-solving techniques about questions of household management, which are common in every family, often are matters of difficulty, and usually go unexamined. But most important to the purposes of this proposal, families can participate in systematic processes which will engage members in creating a living environment that will enrich the lives of little children within the family, and at the same time, make the older members' lives more rewarding as well. The Rural Education Program maintains, then, that families in rural America can acquire skills necessary to become problem-solving, "inquiring" families, and if they so choose, develop an "ideal" family-centered environment.

The first requirement of such an "ideal" environment is that children must be urged to enjoy freedom of choice from among an array of alternatives. Children can be crushed by dominating parents who make inordinate demands; they can be fragmented by being used by too many persons or machines (television included); they may become passive

through loneliness. The goal of the family-centered RFD strategy would be a home environment in which life and play and work combine to avoid these ills (Brandwein, 1968). Such an environment is one in which young family members are free to explore, self-initiate, self-pace and self-control his activities. It encourages them to make a series of discoveries and gives him immediate feedback as to the consequences of his behavior. (Nimnicht, McAfee and Meier, 1969). The "ideal" home environment will include corners and alcoves for block play, manipulative behavior, reading and listening activities. There should be secret places, like behind a lounge, into which he can crawl, climb or squeeze to retreat from others, think imaginatively, or determine how much room his body needs in space. There should be books, games and toys of a wide variety.

Parents should be able to receive instruction in how to make the most of the home's amazing potential for the fullest flowering of the child. Instruction by parents at home would teach the child through play, song, poetry, dance, painting, role playing, constructing, etc. Preference would be given to those books and toys for young children that could be used to promote verbal interaction between parent and child (Levenstein, 1971).

In addition to parents teaching their children, older children would be trained and encouraged to help younger brothers and sisters.

The "ideal" family would seek and be able to receive training in the systematic processes of inquiry and would come to value data-based decision making. Such a family would organize itself as an "inquiry" team with each member of the family making appropriate and valued contributions to the decision-making process.

These, then are some of the ideal conditions that would need to exist in rural families if the potential of the children in those families is to be nurtured and realized: In summary these ideal conditions seem to be (1) Family members trained to function as an inquiry team, (2) Parents trained in appropriate home teaching techniques, and (3) A readily available supply of educational books, toys, games, recordings, instructions and other materials that support learning and inquiry on loan or for purchase.

Critical Needs. It becomes vividly apparent that some challenging needs will have to be met if rural parents are to be encouraged and helped to provide the kind of home environment described above. We have identified what appear to be the most critical family-centered needs:

1. There is a need to provide rural families with the skills necessary to engage in systematic family-centered, problem-solving and "inquiry" techniques.
2. There is a need to provide rural parents with demonstration, training and encouragement in utilizing appropriate materials and interacting effectively with their children in the home.
3. Educational toys, books, games, songs and helpful hints for the imaginative use of ordinary household items should be made readily available to rural parents.
4. The many new materials and programs, both commercial and non-commercial, for early childhood education should be delivered to rural areas in ways that they can be utilized in homes located in small communities or dispersed throughout the countryside.

Selected Strategy. The Rural Education Program's selected approach to the satisfaction of these needs is to develop in the rural school cluster support center the capability to provide rural parents with encouragement, training and materials needed to engage in inquiry and learning experiences in the home. In these centers, we will specifically advocate the placement of people designated as Educational Home Demonstration Agents (EHDA) who have been trained in the techniques of demonstrating to parents in their homes, individually, or in small groups where practical, the processes and skills of inquiry and the appropriate use of a broad repertoire of early childhood educational materials and instructional procedures. We will provide a training program and develop guidelines for setting up and operating an educational materials lending library for rural families together with several alternatives for distributing these materials to rural homes. And lastly, we will develop descriptions of currently existing commercial and non-commercial early childhood programs such as Children's Television Workshop, The Toy Library, Appalachian preschool materials and create procedures for making these more available to rural homes.

Products. The goal of the Family-Centered RFD strategy is to help rural families become aware of and implement promising practices in the home through which they make the family setting more conducive for small children to achieve their potential. To effectively achieve this end, the Rural Education Program proposes to develop three types of products:

1. Products which support the training of Educational Home Demonstration Agents

2. Products which support the on-going activities of the Educational Home Demonstration Agent; and,
3. Products which support promising educational practices in rural families.

Activity A. Develop Products to Support
the Training of EHDA's

Consistent with our training substrategies, the training program for EHDA's will be field-centered and conducted in the Cluster Support Center. Trainees will learn through awareness activities and on-the-job training.

Product 1. A Design For A Training Program

A syllabus for training EDHA's will be developed. This syllabus will contain information about change process, effective intervention strategies, techniques for providing information to client families, and activities to be undertaken during the training period. A system for assessing trainee competencies will be developed, and activities for improvement in areas of deficiency will be included.

Product 2. A Kit of Materials To Support
The EHDA Training Program

A set of materials will be prepared which provide trainees with the following: theoretical information on learning and change process; case study material on intervention and consultation techniques; training activities with material designed to enrich rural homes; simulation activities in prototype family settings; procedures to learn about existing appropriate material and practices; skills in gaining access to special consultant services available through existing medical, social and educational agencies.

Activity B. Develop Products To Support The
On-Going Activities of EHDA

The role of the Educational Home Demonstration Agent requires him to enter rural homes, and to model effective practices to enhance the development of small children. To meet their responsibilities, the agent needs various materials to help parents explore new ways to organize homes to enhance children's learning. He needs access to a variety of objects to enrich the home environment and thereby provide children alternative activities from which they can choose. And he needs ready access to information about medical and social as well as educational services available within a given region.

Product 1. Prototype Environment Enrichment Materials.

The EHDA requires prototype materials to use in demonstrating activities and procedures which rural parents can adopt in their homes to create an environment to foster healthy child growth and development. Many materials already exist; others will require conceptual work and prototype development. Consistent with the notions of the learner-centered RFD strategy, materials will be collected which provide opportunities for multi-sensory stimulation, alternatives and decision making, and exploration with real or near-real phenomena.

Activity C. Develop Products To Help Families
Engage In Inquiry

It is possible to construe a family as an inquiry team. Members of the family can assume roles and fulfill responsibilities so as to enable it to systematically examine its problems, assess available alternatives, select a strategy, implement it, and then assess its impact. In addition to the services of the Educational Home Demonstration

Agent, however, the family as an institution required certain materials to train it in the processes of inquiry as well as to guide and sustain its activities if it is truly to become a functioning family inquiry organization.

Product 1. A Guide To Family Inquiry Process

Prepared in looseleaf notebook form, this guide will contain hints and suggestions for effective family inquiry. It will suggest a model for problem-solving, and indicate different roles that family members may assume. It will provide a series of questions and activities to be raised in the process of inquiry, and it will contain suggested ways to develop the skills necessary for the inquiry process to function.

Product 2. A Parent's Notebook for a Rich Home Environment

This document will consist of two parts. The first will contain a guide for transforming common objects found in the rural home into creative playthings. The second part, in the style of the Whole Earth Catalogue, will provide information about how and where to obtain inexpensive objects which can contribute to the creation of a rich home environment for children.

Activity D. Develop Products To Help Rural School Systems Deliver Promising Practices to Rural Families

The primary objective of this activity will be to prepare products that can assist rural school systems deliver needed information, services, and helpful materials to rural families in thinly populated areas. Several alternatives for delivering information and services are successfully being used in rural areas. There is the Appalachian Regional Educational Laboratory's mobile unit that calls on rural

homes on a regular schedule. The Stevenson-Carson School District in southwest Washington is using modular cartons to deliver kits of materials to rural homes. At a monthly meeting parents can check out these cartons. In Utah, the toys in the Toy Lending Library (developed by the Far West Regional Educational Laboratory) are checked out by parents at a weekly meeting or by family members who attend school. From these and other innovative practices around the country we will develop guidelines and models for adequately serving rural families with materials and services that support family inquiry and in-the-home learning.

Product 1. A Plan For A Family-Centered RFD
Learning Materials Lending Library

A plan for a lending library of creative toys, games and other materials will encompass a "search and collect" component for already existing high experience toys. Also included will be helpful hints and plans for developing other educational materials for home-centered learning activities. It will also contain alternative procedures for the distribution of material to homes to be used for a limited period of time before continued circulation.

EVALUATION OF THE FAMILY-CENTERED RFD STRATEGY

The evaluation of this strategy would contain all of the activities which are outlined in the Evaluation Plan. Products which are developed within this strategy would pass through the three formal stages of testing. Likewise, the evaluation would focus upon the three hierarchical levels of development; namely, products, component, and program strategy.

The general evaluation activities for this component would occur in the following order:

1. Specification of enabling goals and component performance criterion
2. Identification and specifications of products
3. Specification of product objectives
4. Product evaluation
 - exploratory testing
 - pilot testing
 - field testing
5. Component evaluation
 - combined product performance
 - component performance
6. Program evaluation

Please refer to the Evaluation Plan in this document for a detailed explanation of these evaluation activities.

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IV. DISSEMINATION PLAN

Introduction

The long gestation of our hope to better the Rural Education Program presupposes delivery, and schools must benefit from our development or it will be abortive. Rural educators cannot pass on improved learning opportunities to their students unless means and materials are received into their hands. Rural citizens cannot participate effectively if they lack the necessary skills and resources. Unless our products can be distributed and used, the imaginative energies of the Laboratory will have come to nothing.

So, it is our ultimate desire to extend our efforts to insure the flow of ideas and products into the furthest reaches of rural America. Hopefully, local initiative and participation will nurture growth. This fanning-out of products requires a program of dissemination, a well-conceived and workable plan whereby the products developed, the news of their results and the resources to support their utilization can reach ever-widening segments of rural education; consequently, the mental, physical and spiritual growth of more and more children will be enhanced.

Objectives

The Rural Education Program's Dissemination Plan is designed to meet the following four objectives:

1. To broadly disseminate information about the Northwest Regional Educational Laboratory's Rural Education Program and its selected Rural Futures Development Strategies

2. To help potential clients perceive the interrelated and interdependent character of the different strategies within the program
3. To obtain widespread understanding and use of the Rural Futures Development Strategies in rural America
4. To progressively shift diffusion responsibility from the developers to public and private service agencies and commercial concerns

Rationale

The primary assumption undergirding the Rural Education Program is that change will be effective and lasting if, to the extent possible, those to be influenced by the change have shared in the decisions related to it. Accordingly, the major theme running throughout the Dissemination Plan is the active involvement of potential clients in learning about the Rural Futures Development Strategies and in deciding about the form and substance which a specific rural setting may require.

Products in the Rural Education Program are being developed so that they are supportive of the process of educational improvement in the rural setting. Although the problems faced by rural education would be better met by using all strategies together, considerable benefit will also accrue from independent use of the individual products.

Plan and Procedure

The Rural Education Dissemination Plan has six significant elements.

Cluster Sites. Clusters of small rural schools will serve as experimental units and demonstration sites. Experimental clusters will be identified, with the consent of each school, and selected jointly by State Departments of Education and the Northwest Regional Educational Laboratory. Initial applicants will be sought from the five Northwest States of Alaska, Idaho, Montana, Oregon and Washington. Clusters will consist of from three to eight rural schools, geographically proximate, with a collective enrollment between 1,000 and 1,500 students. A five-year agreement to implement the design of the Laboratory's model rural school will be negotiated with the cooperating schools comprising each experimental cluster. Not more than two cluster sites will be selected for the purpose of field-based development.

Each site will carry out some or all of the following developmental activities:

Field-Based Training

As so much of the training activities for the Rural Education Program involves field settings, specific sites will be identified where training activities can be focused, centralized, tested and observed under real operating conditions. People receiving training will include students, teachers, the administration, members of the community and personnel from both the intermediate school district and the State Agency, who then become advocates for and living disseminators of the Rural Futures Development Strategy. Enthusiasm and broadcast would propel the program

into wider areas of influence than would be possible without the close involvement, in the program, of those people who live and work with the decisions they have helped to make.

Site Visitations

The cluster sites will provide actual settings where Rural Education Program strategies will become operational. Problems encountered in actual operations will be identified and solved. Educators from other districts will be invited to visit and observe the effectiveness of the different strategies in operation and, hopefully, take back with them the best of their observations and a clearer perception of the problems involved.

Cluster Support Services Center. As outlined in our general strategy section under the "Model for the Operational Setting for Product Development," this Center will serve not only as a source of material inflow, but also as a place with material outflow. As the link between Laboratory blueprints and field-based operations, the Cluster Support Services Center is indispensable for the dissemination of pertinent products. These products, brought back to the Center in a tempered form, will be recycled and evaluated constantly; thus, the setting becomes an integral part of fluid communication, essential to the working ideal.

Cluster Centers Network. For widespread coverage of activities being engaged in by cluster sites, the network of centers will play an obvious role for exchange and as a professional testing ground. What

is going on in one cluster will be of keen interest to any other cluster utilizing our Rural Futures Development products, in whatever stage or variation. The interdependency of groups of experimenting schools will rely heavily on up-to-date connections between and among themselves.

Services to Other Rural Schools. Because of the field-based nature of our developmental activities, we can anticipate receiving requests for services from other rural schools or communities. Our experiences and those of other programs in the Laboratory have shown that requests for services generally fall into three categories: requests for information, requests for consultation and requests for help with installation, assistance in the form of a community or school organizing itself for, and becoming engaged in, the process of inquiry or problem solving. How a program with prior responsibilities for development deals with these requests is important not only to the dissemination of the products of the developmental effort, but to the developmental function itself. Unless properly managed, services to potential users of the products can sap the energies and resources of the development effort and thus seriously cripple it. Therefore, we plan to manage requests for information and services in the following manner:

1. Requests for information will be dealt with promptly and informally. No formal procedure for approving the answering of these requests will be established. However, a kit of explanatory materials will be developed to mail or hand out to those who request information about the Rural Futures Development Strategies.

2. Requests for individual consultation, group demonstrations or presentations will be directed to the program director and routed to a staff member who has been designated as a Request Coordinator. These requests will be presented and discussed in staff meetings at which time recommendations will be developed for the director. The staff member who agrees to take the assignment will be able to prepare his presentation or consultation from a repertoire of materials in the form of transparencies, charts, slides, etc., especially prepared for that purpose. His arrangements for visiting with the requesting agency will be made through the Request Coordinator.
3. Requests for help with installation provide the best opportunity to build capability outside of the development team for providing services to rural communities and schools interested in the RFD strategies and products. By utilizing these opportunities to train others as trainers, consultants and change agents, the responsibility and capability to service new starts progressively shifts from the development team to private and public educational agencies and commercial enterprisers. The following guidelines will be observed, therefore, in supplying services to rural schools other than the development sites, so as to maximize the development of trained implementors external to the development, and at the same time, minimize disruptions to the developmental process:

- All requests for Rural Education Program services are to be submitted in letter form to the REP Director. Staff members should hear out verbal requests, but at the same time make it clear that such requests must be written to the REP Director in order to be considered. This applies to both new requests and requests for additional services from agencies already receiving assistance from the REP.
- All requests for services will be considered by the Rural Education Program staff in full staff meetings. This will give all of the staff present an input in the decision-making process.
- Based on staff recommendations, the Director will make the final decision whether or not to conduct a preassessment.
- If REP decides at this stage it cannot or should not supply services to the requesting agency, that agency will be immediately notified by letter by the Director.
- In those cases where REP decides it can or should supply a service, the Director will make immediate contact with the requesting agency by telephone to schedule a pre-assessment conference.
- REP staff members selected for the preassessment meeting will report the findings of such meetings at a full staff gathering. Such a report of findings will enable the REP staff to conduct initial planning for the delivery of services.

- Once REP has decided to supply services, a letter confirming this decision and a service agreement form will be mailed to the requesting agency.
 - It will be the responsibility of the Request Coordinator, in concurrence with the Director, to schedule, plan and oversee the delivery of services.
4. Criteria for deciding whether or not to respond favorably to such a request will include answers to the following questions:
- Are the services requested in harmony with the RFD strategies?
 - Is there opportunity while performing the services to train others who could in turn perform a similar service to other schools and communities?
 - Is the service requested within the time and capabilities of the development staff or are there others to whom this request could better be referred?
 - Is the requesting agency willing and able to commit enough resources to fully pay for the costs and other requirements of providing the service?
 - Is there some contribution to program development needs?

National Dissemination. A plan and procedure to disseminate the tested products and information about the program's effectiveness will involve the following steps:

- Identifying key decision makers in target agencies in rural school districts who have the responsibility and concern for improving rural education

- Implementing an information program for the key decision makers identified above; this procedure will include developing multi-media presentations on each of the rural education strategies, regular publication of both a periodical and a newsletter and the publication of a set of rural education "occasional papers;" these productions will be fed into the ERIC System
- Providing information regarding sources of technical assistance for implementing the Laboratory's Rural Future Development Strategies

International Dissemination. Ambitious as such a heading invariably sounds, we are keenly aware of the need for educational reform in countries other than our own. We feel a strong affinity for developing nations all over the world in their groping for autonomy and self-realization. The problems they face are, in very fundamental ways, similar to the problems we have herein addressed ourselves to; specifically, the desire to develop a dormant potential. The need for emerging human interdependence and mutual concern was borne in upon us sharply by the first moon walk; our earth, if it is to have a future, must belong to the whole family of nations.

Trailblazing organizations with a focus on education, such as the Peace Corps and UNESCO, can conceivably be co-existors or precursors of our Rural Futures Development Strategy, which, because of its generalizability, could have international ramifications.

These six elements, then, constitute the essence of our dissemination plan. Following are a set of figures which indicate targets for

this program. Associated with each target is a set of objectives and activities or procedures which we will follow in our dissemination component of the Rural Education Program.

Target Agencies	Objectives	Activities
U.S.O.E. Regional Offices	Establish linkage with key rural educators in regional offices Obtain support from Laboratory Rural Education Program Strategy	Present multi-media RFD strategies awareness materials at each regional office Get commitment for and active involvement on Support Services Consortium Sustain commitment to program through information program and regular visit of appropriate regional office staff to Laboratory Cluster Support Services Center and demonstration sites Present strategies awareness materials at conferences, meetings, seminars, etc. Report RFD strategies effectiveness through occasional papers, a newsletter and a journal of rural education

Figure 4. Dissemination Outline for Rural Education Program Strategy: U. S. O. E. Regional Offices

Target Agencies	Objectives	Activities
State Departments of Education	Establish linkage with key rural educator in State Departments Obtain support for Laboratory Rural Education Program Strategy Obtain appropriate State Department support for local projects Obtain guidance and assistance in identifying and selecting experimental cluster schools	Present multi-media RFD strategies awareness materials at various support agencies Get commitment for and active involvement on Support Services Consortium Get staff involvement on advisory committee of Cluster Support Services Center Train key staff members in change processes for field consultation and change agency Sustain commitment to program through information program and regular visits of appropriate State Department of Education staff to Laboratory Cluster Support Services Center and demonstration sites Report RFD strategies effectiveness through occasional papers, a newsletter and a journal of rural education Present strategies awareness materials at conferences, meetings, seminars, etc. Advise Laboratory regarding its development and dissemination activities Participate in the Supporting Services Consortium

Figure 5. Dissemination Outline for Rural Education Program Strategy: State Departments of Education

Target Agencies	Objectives	Activities
Intermediate Agencies	Establish linkage with key rural educators in intermediate agencies Obtain support for Laboratory Rural Education Program Strategy Obtain guidance and assistance in identifying and selecting experimental cluster schools	Present multi-media RFD strategies awareness materials at various support agencies Get commitment for and active involvement on Support Services Consortium Establish intermediary units as demonstration centers for Rural Education Program products Train staff members as effective field consultants Train staff members as effective change agents Train staff members as product demonstrators Sustain commitment to program through information program and regular visits of appropriate intermediate agencies staff to Laboratory Cluster Support Services Center and demonstration sites Report RFD strategies effectiveness through occasional papers, a newsletter and a journal of rural education Present strategies awareness materials at conferences, meetings, seminars, etc.

Figure 6. Dissemination Outline for Rural Education Program Strategy: Intermediate Agencies

Target Agencies	Objectives	Activities
School Districts	Obtain support for Laboratory Rural Education Program Strategy Establish cluster experimental schools and student demonstration Establish training programs for teachers, administrators, students and lay officials	Present multi-media RFD strategies awareness materials at local school districts Encourage the employment of an external change agent Hold training workshops for educators and lay officials to utilize Rural Education Program materials (Entry stage, community-based RFD strategy) Make available for assistance in implementing appropriate RFD strategies Supplement services through an ongoing information program, regular visits of staff, students and lay officials to the Laboratory Cluster Support Services Center and other demonstration sites Report RFD strategies effectiveness through occasional papers, a newsletter and a journal of rural education. Present strategies awareness materials at conferences, meetings, seminars, etc.

Figure 7. Dissemination Outline for Rural Education Program Strategy: School Districts

V. EVALUATION PLAN

Introduction

The evaluation process in the Northwest Regional Educational Laboratory emphasizes the collection and analysis of information to support decision making. The evaluation plan must satisfy two sets of criteria in meeting this mission. First, it must provide the development team with data on how well the product works and identify specific weaknesses and limitations of the product for possible revision. Second, it must make explicit to people outside the Laboratory the effectiveness of products under given conditions.

Stages of Evaluation

The development activities of the program require a product to pass through four stages of development--a planning stage, a stage during which the prototype is designed, a stage during which the interim product is designed and a stage during which the final product is designed--and a fifth stage of dissemination or marketing. These stages and the steps within are displayed in the Work Plan. Each stage of development has an associated testing procedure, though in the planning stage such testing is not empirically based. The three empirical testing phases, requiring evaluation designs, are discussed below.

Exploratory Testing. Exploratory testing is associated with that stage of development which ends with the design and approval of a prototype. Here the feasibility of the proposed product is examined. Procedurally, various parts of the proposed product are administered to a limited number of potential users under simulated conditions. The

product may be revised and retested repeatedly, and its development may be terminated, without its leaving this stage. A product remains in this stage until an explicit decision is made to approve the prototype product design. Then it is advanced to the next stage. There may be, on occasion, more than one prototype.

Pilot Testing. Pilot testing is associated with that stage of development which ends with the design and approval of an interim product. This testing is concerned with the collection of data to be used during revisions of the prototype to make it more usable. The first administration of the outcome instruments is also performed to gauge the adequacy of the instrumentation. The method of testing involves an intensive tryout of the product with a limited number of potential users under controlled conditions. The product may be revised and retested repeatedly, and may be terminated, during this stage. The information generated will assist in the decision to revise the prototype or to approve the design of the interim product.

Field Testing. Field testing is included in that stage of development which ends with the design and approval of a final product. In testing the interim product, the focus is on the performance of the product and its ease of implementation with the target population. Also under examination is the consistency or replicability of the product across a range of conditions and variables. While some "debugging" revision may be accomplished here, the focus is on assessing the achievement of the product objectives. The predominance of the data collection and analysis focuses upon the product performance. Testing

is systematic using a rigorously selected sample from the target population in a realistic setting. The decision to revise the product or to approve the design of the final product is based on the generated data. If major revisions are indicated due to poor performance of the product, it may be reassigned to a previous stage of development.

As a product advances from one stage to another, less emphasis is placed on the developmental and revision aspects and more on the meeting of objectives and performance. In other words, the earlier stages of testing focus upon formative evaluation and the later stages of testing focus upon the summative aspects of evaluation. The assessment of each product at each stage is guided by a list of generic evaluative questions. These generic questions at the three stages of testing are:

Exploratory Testing

- Have all the necessary components of the total product been identified?
- Which combination of components would be most acceptable to the target population and yet give the best chance of achieving the product objectives? Consider cost, maintenance, ease of use, efficiency, flexibility, adaptability and social and cultural constraints.
- Are anticipated outcomes (objectives) specified for the proposed product?
- Will the instrumentation provide sufficient information to select the specific combination (or combinations) of components for the product?

Pilot Testing

- Will all the components function together satisfactorily as a self-contained package?
- Is this package acceptable to the potential user (target population)? Is it marketable in this form, i.e., is it aesthetically pleasing, durable, well-organized, economical, manageable, maintainable, safe, etc?
- Under administered conditions, with nonrigorous instrumentation, does the package appear to satisfy the specified outcomes?
- Will the instrumentation provide the necessary information upon which to evaluate the product's achievement of its objectives?
- What limitations are noted in product implementation?

Field Testing

- Can the product function successfully as an independent package, i.e., does it function without Laboratory intervention?
- How well does it function under the varied conditions of the target population, i.e., at what level of objective achievement? What is the consistency of objective achievement?
- Will the instrumentation assess all important effects (intended and unintended) of the product?
- What limitations/constraints/side effects are necessary characteristics of the product?
- Can the product's use be replicated, and is it able to be updated?
- Which components contribute the most and which the least to the success of the product?

Components of the Program

The Rural Education Program will achieve its mission through four basic lines of activity, each of which we term a Rural Futures Development strategy. These are the Community-Centered Strategy, the School-Centered Strategy, Learner-Centered Strategy, and the Support Agency-Centered Strategy. Each of these strategies assumes that the target population should be enabled to move through a sequence of steps under a prescribed set of conditions derived from a generic learning, decision-making and change process model as an approach to identifying and solving their own problems. The products of the Rural Education Program's Rural Futures Development Strategies are designed to assist the target populations in such activity.

Criteria for Evaluation

The ultimate target population of the Rural Education Program is the learners in rural areas. The ultimate goal of the Rural Education Program is to effect changes in learner outcomes--to develop effective and appropriate learning experiences for every learner in the rural environment--by developing competence in learners to make decisions and to execute these decisions effectively in each facet of their environment in a manner consistent with their present level of maturity.

Such global outcomes cannot be measured directly in the early stages of the program. Rather, the program must define what we will call enabling goals which will lead to the ultimately desired changes in learning experiences and life in rural areas. Generally, the enabling goals enhance the capability for systematic, locally controlled, educational change in rural school systems and their communities.

The enabling goals, their relationship to the ultimate goal and their relationship to the Rural Futures Development Strategies are presented in Table I.

Each product developed by each strategy is directed toward the attainment of one or more enabling goals. Each product will have specified measurable objectives and criteria for assessing their attainment. Instruments will be developed to determine the degree to which the objectives were attained. Specifications for the proper use of the product will be developed by which major divergence from the suggested product applications can be recognized. In most cases, as it is consistent with our learning and decision-making model, the instruments will be built into the product, data will be routinely gathered and interpreted as part of the process of using the product, and evaluations will be based heavily on such information.

The program rationale argues that success of the program's Rural Futures Development Strategies depends on the comprehensive implementation of all of the strategies and an evaluation of the degree of success of the program depends on such a comprehensive test. Each of the components of the program could be evaluated according to its attainment of its enabling goal, but this too depends on a complete test of its products. Since there are many products within each strategy, the evaluation of the entire strategy, as a whole, will be derived from a summation of the evaluations of each of the products of the strategy.

Therefore, evaluation within the Rural Education Program will concentrate first on evaluating the products within each component of the program, determining whether they meet their specifications and objectives.

Rural Education Program's Rural Futures Development Strategies	Rural Education Program Objectives	Enabling Goals	Ultimate Goal
Community-Centered Strategy	1. Bring about a more supportive working relationship between the total community and the schools.	1. An open and inquiring decision-making environment in the community.	Develop an effective and appropriate learning environment for every learner in the rural environment.
	2. Bring about a more supportive working relationship among staff members of schools.	2. An open and inquiring working environment in the school.	
	3. Guide curriculum development in the direction of option-filled, student-centered experiences.	3. Develop competence in learners to make decisions and to execute them effectively in each facet of their environment in a manner consistent with their present level of maturity.	
Support Agency-Centered Strategy	4. Bring about more consistent practice of more effective instructional strategies.	4. An open and inquiring learning environment in the classroom and alternative environments where the learner can function effectively.	
	5. Increase the availability and effectiveness of highly trained specialists in rural areas.	5. An openness and ability to use specialized competence from outside to help solve problems.	

Table I. Goals and Objectives of the Rural Education Program

Then, if possible, careful tests will be arranged of an entire set of products to see if, used together, they attain the goal of that RFD strategy. Finally, we hope that at least one cluster site can be found to enable a careful test of all four components or strategies of the program together. This test will be used to determine whether or not the program significantly changes rural schools and brings about an effective and appropriate learning environment for every learner in the rural setting.

Product Evaluation

The products developed by the four components may be classified into three types for evaluative purposes: (1) learning materials, (2) resource or reference materials, and (3) planning and procedural materials. Each type of product is characterized by its own set of evaluative procedures for the collection of formative and summative data. However, a variety of instrumentation and collection procedures may be developed for any given product-type during a specific testing stage, resulting in common elements across types of products. A description of each product type is outlined in the following section, along with the specific lines of questioning utilized in the three stages of testing and the resulting data collection procedures.

Learning Materials. Learning materials are those products designed to develop and enhance specific knowledge and skills in an identifiable target population under specified conditions. Furthermore, learning materials are designed to operate at a designated level of effectiveness in eliciting the desired learner outcomes.

Learning material may exist in a variety of forms: written manuals, audiovisual materials, learning packages or a variety of combinations of these. They may utilize the self-instructional format or a teacher-learner-based relationship.

While the specific evaluation plan for any set of learning materials is based upon the design and intent of that material, formative evaluation is directed toward the development and revision of learning materials to enhance their usability under their operating conditions, i.e., to bring them closer to the product specifications. Summative evaluation is specifically directed toward measuring learner achievement (attainment) of the knowledge and skills specified to result from the product's utilization. A major portion of the second phase of testing involves whether the product specifications--teacher behavior, methods of administration, timing, order, directions for use, etc.--enhance or hinder learner success in the system.

Following are the data collection procedures at the three stages of testing for learning materials.

Exploratory Testing

The intent of this phase of the evaluation program is to collect data for product development and revision. The evaluation inquiries deal primarily with the appropriateness of the learning package to the development objectives of the program and the usability of that package with the target population. The criteria include:

1. What information should the learning material contain?
2. Does the learning material incorporate or make reference to resource material?

3. Have all characteristics of usability been considered in selecting the alternative prototypes, e.g., cost, utility, flexibility, efficiency, maintenance, etc?
4. What are the social and cultural constraints of the target population which may affect the learning process; how might these be taken into account in developing the prototype learning material?
5. What are the variety of objectives for which the learning material might be used?
6. Have all the components been identified which are necessary to enable the target population to meet the objectives through the use of the learning material?
7. What are the different practical combinations of component characteristics which should be tried as prototypes at this stage of testing?
8. Have instruments been designed and "debugged" which will be used to distinguish between the different prototype materials?

The specific instrumentation and procedures utilized to collect this information may include:

- Questionnaire and interview input from a sample of experimental users from the target population, regarding content, format, hardware and other areas of opinion and attitude
- Observations of a sample of the target population utilizing components of the learning package

Revisions are usually anticipated on the basis of this data.

Pilot Testing

The questions asked at this stage of testing deal primarily with the usability of the product, though efforts are made to assess achievement of specified outcomes and to test the relationship between the major operational characteristics of the training program and the achievement of outcomes by learners.

Some of the questions asked about the product in this phase are:

1. Is the learning package acceptable to the user? Why or why not?
2. Which characteristics of the product can be revised? Which must be considered areas of weakness and be described as conditional constraints of the learning material?
3. How can the learning material be designed so that it will be more usable for the target population, and still enhance learning?
4. Will these revisions alter the specifications of the learning material and/or the defined outcomes?
5. What unanticipated outcomes have resulted from the use of the learning material? Must these outcomes be controlled or specified?
6. Under the administered conditions, does the learning material appear to satisfy the specified outcomes (objectives) consistently, i.e., learner achievement?
7. Which conditions and characteristics of the learning material appear to contribute most to the achievement of outcomes? Which least?

8. What are the conditions and limitations which are characteristic of the learning material's implementation?
9. Have instruments been designed and implemented which identify all of the important effects of the learning material?

The specific instrumentation utilized to collect this information may include such procedures as:

- Questionnaires and interviews from a sample of users from the target population
- Checklists and rating scales built into the learning material
- Observations of a sample of the target population utilizing the learning material
- Achievement testing of a sample of the target population which has utilized the learning material. Such tests may include: comprehensive standardized tests to provide baseline information on the test sample; pencil and paper comprehensive tests of cognitive knowledge and skill attainment; observation or interview testing of technical (or manual) knowledge and skill attainment; and simulations to provide more reality-based competency testing situations.

The data collected from its use under controlled conditions are used for revisions, as indicated.

Field Testing

The major concern of this stage of testing is the evaluation of the performance of the product and its effectiveness during use by the target population across a wide range of conditions and variables. In short, does the product satisfy its objectives?

If the product does not work, what is responsible for nonsatisfaction of objectives, and how might it be revised?

Testing is systematically conducted with a sample of the target population operating in various realistic settings. Information is derived from an analysis of the product's performance and the testing conditions under which it occurred. Some of the questions guiding the evaluation at this stage are:

1. Does use of the learning material result in achievement of the specified objectives consistently?
2. Does the learning material operate satisfactorily without Laboratory assistance?
3. Which components or characteristics of the learning material appear to contribute the most/least to the achievement of objectives?
4. How does the achievement of objectives vary with differing target populations and differing conditions of use?
5. What are the limitations and side effects which are conditional for the use of the learning material?
6. Have instruments been designed and implemented which identify the conditions of use and the resultant level of objective attainment?

The instrumentation used to collect this information may include:

- Questionnaires and interviews describing demographic and other characteristics of the sample target population from which population parameters can be inferred
- Observations of a sample of the target population utilizing the learning material

- Achievement testing of a sample of the target population which has utilized the learning material based on the previously developed achievement instruments
- Other descriptive indices which may characterize the conditions under which the product may operate

Attainment of the products' objectives is assessed on the basis of the target population attainment of specified outcomes under described realistic conditions, i.e., without direct Laboratory involvement. Regression analysis will usually be used to identify those characteristics contributing most and least to attainment of objectives.

In summary, the evaluation of learning materials is directed toward identifying the conditions under which the materials do and do not operate satisfactorily and evaluating the effectiveness of the materials in meeting their specified learner outcomes (objectives).

Resource Materials. Products which have been identified as resource or reference material differ from learning materials in that they are "tools" to be used in implementing a skill, rather than being directly involved in the learning of the skill. The material may be supportive of learning and/or planning and procedural materials, or may be designed to serve an independent purpose.

Resource products may also exist in a variety of forms: bibliographic references, awareness materials, research readings or interest and motivational films. They may utilize a variety of media, including the written page, films and tapes. However, the critical characteristic

of resources, for the purposes of evaluation, is the specification of its intended use by the target population.

The evaluation of resources is based upon the relationship between the intended use of the material and the actual outcomes resultant of the materials use or nonuse. Formative evaluation is directed toward the development and revision of resource material to enhance their ease of use, and their effectiveness once used. Summative evaluation is specifically directed toward measuring the effects or outcomes from the use or nonuse of the resource materials by the target population.

Exploratory Testing

Information to enhance product usability is the prime concern of this stage of testing. The questions to which the resources are subjected deal primarily with the appropriateness of the resource to the learning, decision-making and/or change process under which the resource is utilized, and the usability of the resource product by the target population. These questions include:

1. What information should the resources contain?
2. Will the information be adequate as a self-contained unit, or should it make further reference to other sources?
3. How should the information be packaged and presented (form and media)?
4. What other characteristics of usability should be incorporated to insure that the recipient will utilize the resource material?
5. What are the various objectives for which the resource material may be used?
6. How is the resource material intended to be used?

7. What are the different practical combinations of component characteristics which should be tried as a prototype at that stage of testing?
8. Have instruments been designed and "debugged" which will be used to adequately distinguish between the different prototype materials?

The specific instrumentation utilized to collect this information may include such procedures as:

- Questionnaire and interview input from a sample of experimental users from the target population about its quality and value to the recipient, as well as an assessment of the manner and frequency of the material's use
- Observations of a sample of the target population utilizing units of the resource material

Revisions depend on target population and developer input, attitudes toward the resource material as to its potential enhancement of the learning, decision-making or change process being implemented, and its ease of use.

Pilot Testing

The questions to which the resource material is subjected at this stage of testing deal primarily with the match between the product's specifications and the conditions and outcomes for which it has been designed. The questions include:

1. Is sufficient information contained in the resource to adequately cover the range of objectives?
2. Is this information presented or displayed in a manner which is usable and acceptable to the potential target group?

3. How can the resource material be designed so that it is more usable for the target population, and will still adequately cover the specified objectives?
4. Will these revisions alter the specifications of the resource material and/or the defined outcomes?
5. Is the resource material used? If so, how much and under what conditions? Is it used for the purposes for which it was designed?
6. What unanticipated outcomes have resulted from the use of the resource material? Must these outcomes be controlled or specified?
7. Is the resource material a necessary, but not sufficient, condition for successfully implementing the conditions and outcomes for which the materials were designed?
8. Under the administered conditions, does the resource material appear to satisfy the specified outcomes (objectives) consistently?
9. Have instruments been designed and implemented which identify all of the important conditions and effects of the resource material?

The instrumentation utilized to collect this information may include such procedures as:

- Questionnaire and interview input from a sample of "experts" rating the appropriateness of the material (content and format) for the conditions and outcomes for which it was designed
- Questionnaire and interview input from a sample of experimental

users from the target population about its quality and value to the recipient, as well as an assessment of the manner and frequency of the material's use

- Observations of a sample of the target population utilizing units of the resource material

Revisions are based on evidence of the material's utility under the varying conditions and the degree to which it meets outcomes described by the developer, the program, the target population and the experts. The conditions are tentatively described under which the material can be utilized to enhance the specified outcomes.

Field Testing

At this point, the evaluation is concerned with describing the performance of the resource material and the conditions under which it performs satisfactorily and consistently.

The field testing of resource material is a form of context evaluation. The performance of the product is directly related to the conditions under which the material is implemented; thus, these conditions directly affect outcomes. The evaluation is, therefore, a description of the product's performance under a variety of conditions. Some of the questions to be asked of the resource material at this stage are:

1. Does the resource material perform consistently under varying conditions of use?
2. Does the resource material function satisfactorily without Laboratory assistance?
3. Which components or characteristics of the resource material

appear to contribute the most/least to the attainment of objectives?

4. How does attainment of objectives vary with different target population and differing condition of use?
5. What are the conditions and limitations which are characteristic of the product, i.e., what is the relationship between operating conditions and outcome conditions?
6. Have instruments been designed and implemented which specify the conditions of use and the resultant levels of objective attainment?

Instrumentation procedures are generally subjective in nature. Open-ended questionnaires and interviews are employed, by which the product recipient describes the conditions of use and the effects he attributes to the resource material. Secondly, documentation procedures are used to monitor the use and conditions of material implementation in a sample of target population sites.

Planning and Procedural Materials. Products which are identified as planning or procedural material have characteristics which are similar to both learning materials and resource materials in that they define an expected outcome. However, they do not define the outcomes in terms of learning or training; rather, in terms of implementing a process or procedure. Planning and procedural materials are similar to resource materials in that they are "tools" which are useful under specified conditions. However, they are directly involved in specifying the process, i.e., they are a necessary and integral part of the process

itself. Generally, planning and procedural products are guidelines or directories which outline a format for implementing a specific process.

Products of this nature may be developmental systems, models or guidelines. They may be specific or generic in nature. They are generally in the form of written materials, although they may appear in a variety of other forms.

The evaluation of planning and procedural materials is based upon the relationship between the specified conditions for its use and the process outcomes resulting from its implementation. The evaluative approach is similar in many respects to the evaluation of learning materials, except that the performance in terms of achievement cannot be evaluated on the grounds of knowledge and skill attainment by the user. Rather, the summative evaluation of planning and procedural materials are assessed in terms of whether or not implementation of that plan or process occurred.

Exploratory Testing

The questions asked at this stage of testing deal primarily with the usability of the product. The evaluation is concerned with the appropriateness of the planning and procedural materials to the needs and capabilities of the target population. These questions are:

1. What information should the planning and procedural material contain?
2. Will the information be adequate as a self-contained unit or should it make reference to other sources? Is the material generic or specific in nature?

3. How should the information be packaged and presented (form and media)?
4. Have all of the components been identified which are necessary to enable the target population to employ the planning and procedural material in meeting their objectives?
5. What other characteristics of usability should be incorporated to insure that the recipient can effectively utilize the material?
6. What are the various outcomes toward which the planning and procedural material may be applied?
7. What are the different practical combinations of component characteristics which should be tried as a prototype?
8. Have instruments been designed and "debugged" which will be used to distinguish between the different prototype material and the different outcomes toward which they may be applied?

The specific instrumentation and procedures utilized to collect this information may include:

- Questionnaire and interview input from a sample of experimental users from the target population, regarding content, format and other areas of opinion or attitude toward product potential
- Observations of a sample of the target population utilizing components of the planning and procedural materials

Revisions on the basis of this data are usually anticipated.

Pilot Testing

The questions asked of the product at this stage are primarily concerned with product usability (applicability) by the target

population and a preliminary assessment of conditions and outcomes of the product's use. Some of the questions at this phase are:

1. Does the target population appear willing and able to use the planning and procedural material? Do they perceive a need for these materials? Does a discrepancy exist between the intended use of the material and the target population's actual use, in terms of specified outcomes?
2. Is sufficient information contained in the planning and procedural material to adequately cover the range of outcomes?
3. How can the planning and procedural material be designed so that it is more usable for the target populations, and will still adequately cover the range of specified outcomes?
4. Will these revisions alter the specifications of the materials and/or the defined outcomes?
5. Is the planning and procedural material used? If so, under what conditions, for what purpose and with how much difficulty?
6. What unanticipated outcomes have resulted from the use of the planning and procedural material? Must these outcomes be controlled or specified?
7. Are the planning and procedural materials a necessary and sufficient condition for successfully implementing the conditions and outcomes intended by the target population?
8. Under administered conditions, does the planning and procedural material appear to satisfy the specified outcomes consistently?
9. Have instruments been designed and implemented which identify all of the operating and outcome conditions of the planning and procedural material?

The specific instrumentation utilized to collect this information may include such procedures as:

- Questionnaire and interview input from a sample of experimental users from the target population, regarding content, format and other areas of opinion or attitude toward product potential
- Observations of a sample of the target population utilizing components of the planning and procedural material
- Documentation of the product's use and the resultant outcomes

Revisions are based on evidence of the material's utility under the varying conditions and the degree to which it meets outcomes described by the developer and the target population.

The conditions are tentatively described under which the materials can be utilized to enhance the implementation of specified processes (outcomes).

Field Testing

At this point the evaluation is concerned with describing the range of conditions under which the materials function satisfactorily and the specification of the variety of outcomes toward which they may be applied. Some of the questions asked of the planning and procedural material are:

1. Does the product satisfy the specified outcomes consistently, i.e., can users consistently and successfully implement the process or procedure in question after utilizing the planning and procedural material?
2. Can the target population successfully utilize the material-- success as measured in terms of process implementation-- independent of Laboratory involvement?

3. Which components or characteristics of the planning and procedural material appear to contribute most/least to the process implementation?
4. How does implementation of the process, resultant of the material's use, vary with differing target populations and differing conditions?
5. What are the conditions and limitations which are characteristic of the planning and procedural material, i.e., what is the relationship between operating conditions and outcomes?
6. Have instruments been designed and implemented which specify the conditions of use and the resultant outcomes in terms of process implementation?

Instrumentation procedures utilized to collect this information rely heavily upon observation and documentation of the product's use and resultant outcomes. This may include interviews, questionnaires and observations of the user population.

Strategy or Component Evaluation

Field test sites will be established for each of the major components, or Rural Futures Development strategies, of the Program. Different products will, of course, be at different stages of development within each strategy during the five year developmental effort.

However, new field test sites will be found for a complete test of all of the products of one component or strategy, used in a single coordinated effort, as soon as all of the products of the component have reached at least the "interim product" stage.

An integral part of these evaluation activities, beyond the product

level, will be the assessment of each strategy's attainment of performance requirements. Performance criteria have been specified for each of the four strategies. These performance requirements are as follows:

Community-Centered RFD

- By 1976, the Laboratory will have trained seven (7) trainers and twenty (20) change agents who manifest in their performance the competencies specified
- By 1977, at least five (5) rural communities will have engaged trained change agents to help them develop patterns of involvement to utilize effective processes and acquire needed skills for dealing with local educational issues
- By 1977, change agents will have successfully and NWREL's Community-Centered RFD products in five (5) rural communities to gain the support of school administrators and local school boards in using their services and utilizing NWREL's strategies to involve citizens in educational decision making

School-Centered RFD

- By 1977, at least five (5) rural schools will have elected to utilize NWREL's School-Centered RFD products to create an "inquiring school"
- Faculty members who have participated in NWREL's School-Centered RFD training program and are using the related guides will manifest expected growth in the competencies specified for productive inquiry and "inquiry team" participation
- Rural school administrators who have been trained to administering

an "inquiry school" will engage their staff members with citizens and students in identifying school problems, organizing inquiry teams, assigning cluster of decisions and facilitating the work of these teams

Learner-Centered RFD

- Sixty percent of the rural schools and communities that utilize NWREL's RFD products will elect also to use the Laboratory's Curriculum Development and Teaching Training Products
- Teachers who have been trained in the Laboratory's RFD Teacher Training System will exhibit the competencies specified for engaging students in learning experiences that build competencies for making and executing in-life decisions
- Students who are engaged in "ventures" and "carrier projects" as specified will grow in competence to make and execute decisions

Support Agency-Centered RFD

- By 1977, five (5) state agencies and five (5) intermediate districts will have elected to utilize the NWREL's Support Agency RFD Training System to train all their personnel who work with the rural school districts that are involved in using the other Laboratory RFD strategies

The attainment of these performance requirements by application of each of the strategies will be assessed by documentation of the specified performance within the established time frame. Other instrumentation procedures may be necessary for some performance criteria which require the assessment of knowledge and/or skills of a specified level. Further-

3

more, performance criteria which are specified within the affective domain will be assessed by the utilization of instruments measuring attitudes, opinions and/or values of the participants toward the strategy in question.

At this point it will be possible to evaluate the attainment of the overall objectives of that strategy (Table I). Such evaluation will involve developing interview and observation instruments, unobtrusive indicators of the objectives and a methodology for taking periodic readings with these instruments during the course of the test.

We anticipate one full-scale, one-to-two year test of each strategy toward the end of the five year development effort.

Total Program Evaluation

If it becomes possible to establish clusters of rural school sites, and if strategies have been tested separately, it will be possible and valuable to attempt a full-scale test of all four Rural Futures Development strategies used together. This is the intended form of evaluation of the total Rural Education Program. One new cluster would be identified and the four strategies would be used together. The evaluation procedure would concentrate on measuring the degree to which the ultimate goal of the program was achieved.

We doubt whether this total evaluation will be possible within the five year initial timeline, but most of the instrumentation and methodology for the full-scale test will have been developed and embedded in the products and strategies, thus making a full-scale test possible at any future time.

VI. WORK PLAN

Introduction

The Work Plan presented here is for the minimum program contained in four of the five strategies. It is a five-year plan. Inasmuch as some of the activities involved in the plan are now in progress, the programmatic chart shows the current stage of development for each product now being developed and the stage at which it will be on November 30, 1972, the beginning of the five-year period covered by this proposal. Detailed development plans are displayed for each of the fiscal years 1973, 1974, 1975, 1976 and 1977.

Five presentations are included in this section of our program description:

1. Components and Products: This is a brief summary of each program component including the activities and products being developed within each activity.
2. A chart and a description of the developmental stages through which each product must pass.
3. A program work chart which is a flow chart showing the time, personnel and fund requirements for taking each activity through the various planned stages of development and the milestone decision-making points at which progress is reviewed and inadequacies are spotted and corrected.
4. Personnel Evaluation that contains the vita of key persons involved in the work plan.
5. Fiscal requirements for each component for each of the five fiscal years.

Components, Activities and Products

The work of the Northwest Regional Educational Laboratory's Rural Education Program in developing products needed to implement four of Rural Futures Development Strategies has been divided into four components that match each of the four set of strategies, viz. the Community-Centered RFD Strategy, the School-Centered RFD Strategy, the Learner-Based RFD Strategy and the Support Agencies-Centered RFD Strategy. Within each of these components are several activities each of which has as its purpose the development of several products that are needed to accomplish a specific outcome with a particular target population. The chart below displays these four components, their respective activities and the products that each activity will develop.

The focus of all of the products, of course, is upon the active learner and his need for engagement in want-satisfying learning tasks that build decision-making competencies toward self-actualization and career development. Component III develops products that intervene into his immediate learning environment; Component II develops products that influence the quality of the institution directly responsible for managing a productive learning environment; Component I is responsible for products that help the community become involved in creating better learning conditions; and within Component IV we develop products that are designed to influence the quality of the support services provided by state education agencies and intermediate districts.

The products of these four components are mutually reinforcing and should be used together, in concert, to create a total environment that will trigger the kind of comprehensive educational reform needed if rural students are to have the educational opportunities they need and deserve.

Components, Activities and Products

Components	Activities	Products
<u>Component I.</u> The Community-Centered RFD Strategy	<u>Activity A.</u> Develop products which support the activities of the Community Action Team	1. Community Action Team resource catalogue 2. School Board and Administrators' awareness materials 3. An information search manual
	<u>Activity B.</u> Develop products which support the activities of the Change Agent	1. A Change Agent Manual 2. Change Process Notebook 3. A kit of Awareness-Building materials
	<u>Activity C.</u> Develop a Training Program for Change Agents and Trainers	1. A Training Plan Guide 2. A Kit of Training materials

Components	Activities	Products
<u>Component II.</u> School-Centered RFD Strategy	<u>Activity A.</u> Develop products for Training School Consultants	1. A Training Program Guide 2. A Kit of selected and developed training materials
	<u>Activity B.</u> Develop products which support the activities of Inquiry Teams	1. Inquiry Process and Resource Guide 2. Inquiry Skill Building Kit
	<u>Activity C.</u> Develop products for Institutional Inquiry Consultants	1. A Consultant's Manual for Institutional Inquiry 2. A Consultant's Presentation Kit
	<u>Activity D.</u> Develop products for Rural School Administrators	1. Models and Guidelines for Inquiring Schools 2. A Guidebook - How to Establish and Operate a School Administrators' Problem-Solving Clinic 3. A Kit of materials for the Clinic

Components	Activities	Products
<u>Component III.</u> Learner-Centered RFD Strategy	<u>Activity A.</u> Develop Instructional Systems with Model RFD Type Curriculum material	1 to 8 Eight prototype Instructional Systems (Art K-3, Art 4-6, Math Analysis, Environmental study, Search for a Career, Analyzing Values, Interpersonal Relations, Community Study.)
	<u>Activity B.</u> Develop products which guide the development of RFD Type materials	1. Catalogue of existing RFD and type units 2. A Materials Search Guide 3. A Curriculum Development Guide
	<u>Activity C.</u> Develop products which facilitate the Rural Teacher Development	1. A Rural School Administrator Manual for Teacher Development 2. A Teacher Development Center Operations Manual 3. A Teacher Development Program Syllabus 4. A Kit of existing and specially developed materials
	<u>Activity D.</u> Develop Learning Management products	1. An Instructional Information Management Guide 2. A Notebook of Useful Remodeling Hints 3. A Community Resource Utilization Guide

Components	Activities	Products
<u>Component IV.</u> Support Agency-Centered RFD Strategy	<u>Activity A.</u> Develop a System for Training Support Agency Field Consultants	1. A Training Manual 2. A Trainees' Handbook 3. A Consultants' Field Book

Developmental Stages

The procedures for developing educational products within the Northwest Regional Educational Laboratory follow a highly specific set of stages and events as shown on page 12, Part Three: Institutional Descriptions. These have been modified slightly to fit the product development sequence requirement of the Laboratory's Rural Education Program, Figure

Several points about the meaning and use of these stages and events are:

1. The stages are logically linear, while the events may not be linear.
2. Events are used as the accumulation of important tasks that lead to a milestone event or decision point.
3. Decision points, coded with "decision diamonds" are the key to the iterative processes of development.
The decision options at each point are defined.

Following is a brief description of each of the Rural Education Program's five stages of development and the events within each stage.

A. Planning Stage

1. Identify the problem: Specify the conditions to be affected, effect of the problem on learners, and the rationale for making this problem a Laboratory priority.
2. Specify constraints and criterion: Specify what conditions will exist if the problem is solved, what limitations are placed upon the solution and what indicators will be used to identify that the solution

requirements have been met. Specify performance criteria.

3. Plan development.
4. Plan dissemination.
5. Plan evaluation.
6. Test plans against criteria.

7. Approve plans.

B. Design Prototype Stage

8. Product exploratory units: This is an exploratory draft, mock-up of a product or unit piece of a product to enable exploratory testing.

9. Test exploratory units. The exploratory test is a try out with a limited number of potential users to ascertain feasibility.

10. Analyze exploratory data.

11. Design prototype product. The design and specifications that reflect the results of the analysis of exploratory data which will be used to guide the creation of the prototype are detailed.

12. Approve prototype design.

C. Design Interim Product Stage

13. Product prototype according to design specifications.

14. Conduct pilot test - an intensive tryout of the prototype of product(s) is made with a limited number of potential users under controlled conditions to ascertain revision needs, replicability and attainment of objectives.

15. Analyze pilot test data.

16. Design Interim product: The design and specifications reflecting the results of the analysis of pilot test data, that will be used in creating the interim product(s) are detailed.

17. Approve interim product design.

D. Design Final Product Stage

18. Produce interim product according to design specifications.
19. Conduct field test according to evaluation plan. A systematic testing of the product(s) is made with a rigorously selected sample from the target group in a realistic setting.
20. Analyze field test data.
21. Design final product - making alterations as made necessary by the analysis of the field test data

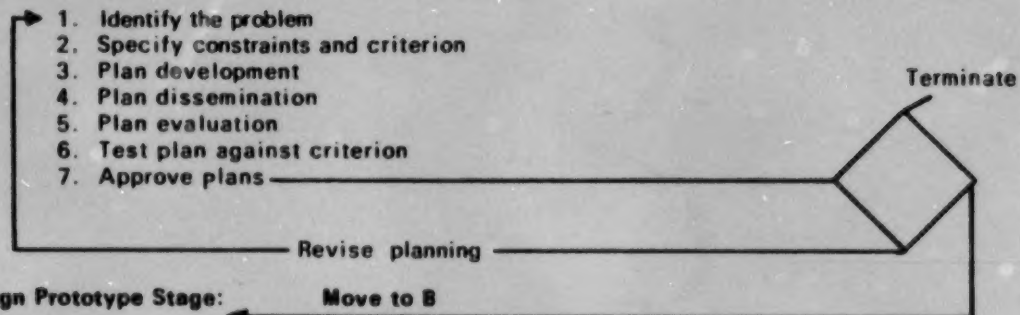
22. Approve final product design and authorize the planned dissemination to take place.

E. Manufacture, Market and/or Disseminate Final Product

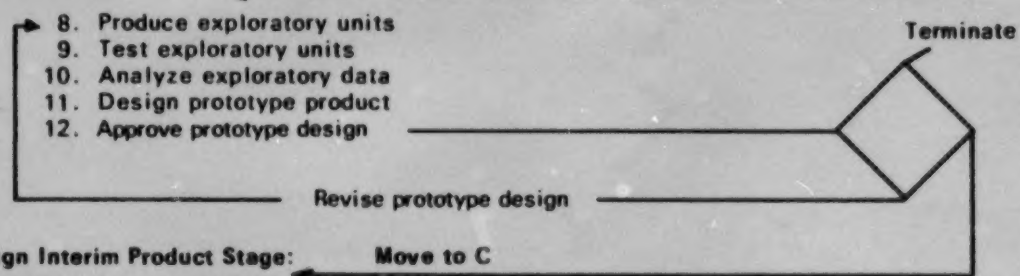
STAGES

MILESTONE EVENTS

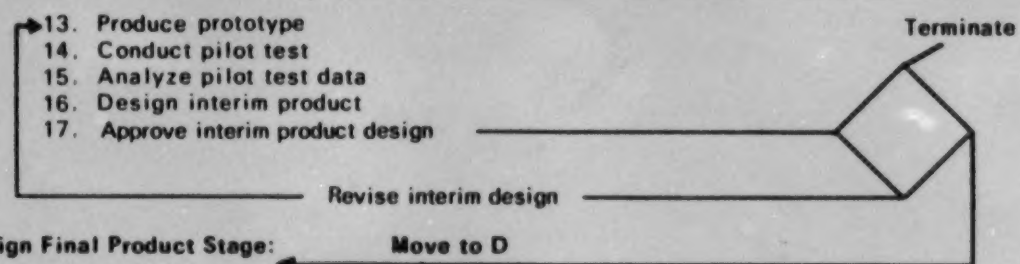
A. Planning Stage:



B. Design Prototype Stage:



C. Design Interim Product Stage:



D. Design Final Product Stage:

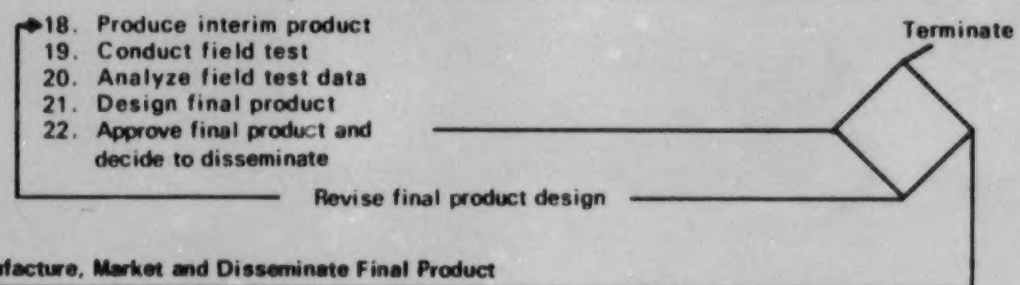


Figure 8. DEVELOPMENT STAGES AND MAJOR MILESTONE EVENTS

Program Work Chart

The Program Work Chart on the following pages graphically portrays the proposed timeline for each of the Rural Education Program products. The various development stages and milestone events are keyed into the chart of development stages shown on pages 221, 222 and 223.

COMPONENTS ACTIVITIES AND PRODUCTS	1973
COMPONENT I. Community Centered RFD Products	
Activity A: Develop products which support the activities of the community Action Team Products:	
1. CAT Resource Catalogue	7 Design Prototype 12
2. Awareness Materials - School Board & Administration	Design Prototype 12 Pilot Test Prototype
3. Search Manual	12 Pilot Test Prototype and Design Interim Product 17
Activity B: Develop products which support the activities of the Change Agent Products:	
1. Change Agent Manual	7 Design Prototype
2. Change Process Documentation	7 Design Prototype
3. Awareness of Change Materials	7 Design Prototype
Activity C: Develop a Training Plan for Change Agents & Trainers and special training materials Products:	
1. Training Plan	7 Design Prototype
2. Training Kit	7 Design Prototype
COMPONENT II. School Centered RFD Products	
Activity A: Develop products for training Institutional Inquiry Consultants Products:	
1. A Training Program Plan	Plan Development 7
2. A Kit of Training Materials	Plan Product Development
Activity B: Develop products that support the activities of Inquiry Teams Products:	
1. Inquiry process and resources guide	Plan Development 7 Design Prototype
2. Materials to build inquiry skills	Plan Development 7
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1974		1975	
Pilot Test, Prototype		and Design Interim Product	17
and Design Interim Product	17	Conduct Field Test	and Design Final Product
Conduct Field Test and Design Final Product		22	Disseminate, etc.
12	Pilot Test Prototype	and Design Interim Product	17
12	Pilot Test Prototype	and Design Interim Product	17
12	Pilot Test Prototype	and Design Interim Product	17
12	Pilot Test Prototype	and Design Interim Product	17
12	Design Interim Product	17	Conduct Field Test and Design Final Product
Design Prototype		12	Pilot Test Prototype and Design Interim Product
7	Design Prototype	12	Pilot Test Prototype and Design Interim Product
12	Design Interim Product	17	Design Final Product
Design Prototype		17	Design Interim Product
		17	Design F

		1976		1977	
Product	17	Conduct Field Test	and Design Final Product	22	Disseminate
	22	Disseminate Final Product and conduct Installation Test			
	17	Conduct Field Test	and Design Final Product	22	Disseminate
	17	Conduct Field Test	and Design Final Product	22	Disseminate
	17	Conduct Field Test	and Design Final Product	22	Disseminate
uct	17	Conduct field Field Test	and Design Final Product	22	
Design Final Product		22	Disseminate and Conduct Installation Test		
m Product	17	Conduct Field Test	and Design Final Product	22	Disseminate
Design Interim Product		17	Conduct Field Test	22	Disseminate
Design Final Product		22	Disseminate, etc.		
17		Design Final Product	22		Disseminate, etc.

Activity C: Develop Products for Institutional Inquiry Consultants		1973		
Products:				
1. Manual for Institutional Inquiry Consultants	Plan Product Development	7		Design
2. Presentation Kits	Plan Product Development		7	
Activity D: Develop Products for training Administrators				
Products:				
1. Model and Guidelines	Plan Product Development	7	Design Prototype	
2. Training Clinic Design & Op. Procedures	Plan Product Development		7	
3. Kit of Training Materials				Pl
COMPONENT III. Learning Environment Centered RFD Products				
Activity A: Develop products that model RFD curriculum materials				
Products:				
1. ART K-3 System	17	Design Final Product	22	Dissem
2. Art 4-6 System	12	Design Interim Product	17	Design
3. Math Analysis System	17	Design Final Product	22	Dissem
4. Environmental Study System		Plan Development	7	Design
5. Search for Career System				
6. Interpersonal Transactions System		Plan Product Development	7	Design
7. Analyzing Values System				Pl
8. Community Studies System		Plan Product Development	7	
Activity B: Develop products that guide the development of RFD-type materials				
Products:				
1. RFD Units, Catalogue			Plan Development	
2. RFD Materials Search Guide				
3. RFD Materials Development Guide		Plan Product Development	7	

1974

1975

	7		Design Prototype	12	Pilot Test Prototype		and Design Interim Product				
Development		7		Design Prototype		12	Pilot Test Prototype & Design Interim Product				
	7	Design Prototype		12	Design Interim Product		17	Design Final Product		22	
Development		7		Design Prototype		12		Pilot Test Prototype and Design Interim Product			
				Plan Product Development		7		Design Prototype		12	
Product		22		Disseminate Final Product and Conduct Installation Test							
Product		17		Design Final Product		22		Disseminate Final Product and Conduct Installation Test			
Product		22		Disseminate Final Product and Conduct Installation Test							
	7			Design Prototype		12		Design Interim Product		17	
				Plan Development		7		Design Prototype		12	Design Interim Product
	7			Design Prototype		12		Pilot Test Prototype & Design Interim Product		17	
				Plan Development		7		Design Prototype		12	
Development		7		Design Prototype		12		Design Interim Product		17	
				Plan Development				Design Prototype		12	
				Plan Product Development		7		Design Prototype		12	
Development		7		Design Prototype		12		Pilot Test Prototype and Design Interim Product		17	

1976

1977

Conduct Field Test and Design Final Product

12

Disseminate

17

Conduct Field Test

and Design Final Product

22

Disseminate

Disseminate Final Product and Conduct Installation Test

17

Conduct Field Test and

Design Final Product

22

Disseminate

Design Interim Product

17

Conduct Field Test & Design Final Product

22

Disseminate

Design Final Product

22

Disseminate Final Product and Conduct Installation Test

17

Design Final Product

22

Disseminate

Design Final Product

22

Disseminate Final Product and Conduct Installation Test

Design Interim Product

17

Conduct Field Test and Design Final Product

22

Disseminate

Conduct Field Test & Design Final Product

22

Disseminate Final Product and Conduct Installation Test

Design Interim Product

17

Design Final Product

22

Disseminate

Conduct Field Test & Design Final Product

22

Disseminate Final Product and Conduct Installation Test

Activity C: Develop RFD Teacher Training System Products:	1973
1. Administrator's Manual	
2. Training Center Manual	
3. Program Syllabus	Plan Development 7 Design Prototype
4. Training Materials	12 Design Interim Product 17
Activity D: Develop RFD Learning Management products Products:	
1. Information Management Guide	
2. A Book of Useful Remodeling Hints	
3. Community Resource Utilization Guide	Plan 7 Design Prototype 12
COMPONENT IV. Support Agency Centered RFD Products	
Activity A: Develop a system for training support agency Field Consultants Products:	
1. Trainers Manual	Plan Product Development
2. Trainees Handbook	Plan Product Development
3. Consultants Field Book	
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1974				1975			
				Plan Development		7	
				Plan Development		7	
12	Design Interim Product		17	Conduct Field Test & Design Final Product		22	Disseminate
Conduct Field Test & Design Final Product			22	Disseminate			
			Plan Development	7	Design Prototype		12
			Plan Development	7	Design Prototype		12
Design Interim Product		17	Design Final Product		22	Disseminate	
7	Design Prototype		12	Pilot Test Prototype & Design Interim Product		17	Conduct
7	Design Prototype		12	Design Interim Product		17	Conduct
Plan Product Development			7	Design Prototype		12	Design Interim Product

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		1976				1977			
Plan Development		7	Design Prototype	12	Design Interim Product	22	Disseminate		
Plan Development		7	Design Prototype	12	Design Interim Product	22	Disseminate		
Final Product	22	Disseminate							
Design Prototype	12	Design Interim Product			17	Design Final Product		22	Disseminate
Design Prototype	12	Design Interim Product	17	Design Final Product		22	Disseminate		
Interim Product	17	Conduct Field Test and Design Final Product				22	Disseminate		
Product	17	Conduct Field Test and Design Final Product				22	Disseminate		
2	Design Interim Product	Conduct Field Test & Design Final Product				22	Disseminate		

Personnel Evaluation

Below is a list of the key personnel to be involved directly as staff or staff consultants in the product development activities of the Rural Education Program. As indicated there are several positions for which specific personnel have not yet been selected.

Following the personnel list are one-page vita for each of the key staff members who have been selected to work with this program:

Development Division Director	Norman K. Hamilton
Program Director	Rowan C. Stutz
Component I Director	Ray E. Jongeward
Component II Director	John Williamson
Component III Director	Chester A. Hausken
Component IV Director	To be selected
Research and Evaluation Director	Jerry L. Fletcher
Dissemination Coordinator	To be selected
Research and Evaluation Specialist	Joan L. Goforth
Research and Development Specialists:	Warren S. Adams
	Roger Bishop
	Allen L. Dobbins
	Lee M. Green
Graphics Artist	Melvin K. Krebs
Special Consultants and Contractors:	Frank Bach
	Philip G. Kapfer
	Edward O. Moe
	Richard A. Schmuck
	Asahel D. Woodruff

VITA

DR. WARREN S. ADAMS

Field Staff Specialist, Alaska Change Process Development and
Neah Bay, Washington Change Process Development,
Northwest Regional Educational Laboratory

Education

B.A. Nebraska State College
M.Ed. University of Oregon
Ed.D. Oregon State University

Experience

Teacher, Coach
Elementary and Secondary School Principal
District School Superintendent
Deputy I.E.D. Superintendent
Executive Director, Oregon Council for Curriculum
and Instruction
Title III Project Director
Production Coordinator for Tooling (Industry)

Consultant in the areas of organization and planning
for curriculum, educational administration and
teacher inservice

VITA

MR. FRANK BACH

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

M.A. Wisconsin State University
B.A. Wisconsin State University

Experience

Teacher
Professor, Art Education
Advisor, National Committees for Art Programs

Author of numerous publications on art education
Producer of numerous films for art education and
art instruction

Consultant and Advisor to E.M.I. Film Company

VITA

MR. ROGER BISHOP

Field Staff Specialist, Rural Education Program, Northwest
Regional Educational Laboratory

Education

Major University of Montana, Missoula

Experience

Teacher
Administrator-Teacher
Change Agent-Teacher
Consultant

Consultant in social studies curriculum and
innovated school practices

VITA

DR. ALLEN L. DOBBINS

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

B.A. Stanford University
M.A. Stanford University
M.A. Stanford University
Ed.D. Harvard Graduate School of Education

Experience

Teacher/Team Leader
Guidance Counselor
Supervisor of Curriculum Implementation
Director, Harvard Social Studies, Teacher Training Project
Assistant Professor of Education, Portland State University
Vice Principal, Curriculum, Adams High School, Oregon
ESEA Title I Coordinator

Author of articles on curriculum and instruction, and
on staffing patterns

Consultant to numerous school districts on innovations in
curriculum and instruction

VITA

DR. JERRY L. FLETCHER

Research and Evaluation Specialist, Rural Education Program,
Northwest Regional Educational Laboratory

Education

A.B.	Harvard College
M.A.T.	Harvard Graduate School of Education
Ed.D.	Harvard Graduate School of Education

Experience

Teacher
Consultant on Educational Games
Supervisor of Curriculum Implementation
Project Director, Design of New Patterns for
Training Educational R D D & E Personnel, U.S.O.
Coordinator of the Planning Grant, Portland Public
Schools Experimental Schools Proposal

Author of numerous articles and publications

Consultant and speaker to various education associations

VITA

MRS. LEE M. GREEN

Consultant, Rural Education Program, Northwest Regional Educational Laboratory

Education

B.S. Portland State University
Continuing Graduate Study

Experience

Research Assistant, Teaching Research Center,
Monmouth, Oregon
Field Instructor for Program Teaching - Educational
Research Evaluation and Development, Oregon
Instructor for Workshops in Project Development and
Proposal Writing, Oregon
Civil Rights Training Instructor, Oregon

Assistant Editor, Compendium on Educational Research,
Development, Evaluation and Dissemination (USOE)

Consultant Speaker, Proposal Writing, Civil Rights
Training

Member, American Education Research Association

VITA

MRS. JOAN L. GOFORTH

Staff Specialist in Research and Evaluation, Rural Education Program,
Northwest Regional Educational Laboratory

Education

B.A. Western Washington State College

Post Graduate studies, Eastern Washington
State College

Experience

Educational Auditor and Evaluator
Legislative Researcher
Researcher in Higher Education
Research Assistant

VITA

DR. NORMAN K. HAMILTON

Director, Division of Instructional Systems Development, Northwest
Regional Educational Laboratory

Education

B.S. University of Oregon
M.A. Stanford University
Ed.D. Stanford University

Experience

Teacher
Principal
Supervising Principal
Director of Instruction
Assistant Superintendent - Instruction and Research

Author of numerous articles on curriculum development

Consultant to various school districts in the areas of
curriculum development and research management
and administration

Consultant and speaker to various national and local
educational associations such as the U.S. Office
of Education, American Society of Curriculum
Directors and the National Education Association

VITA

DR. CHESTER A. HAUSKEN

Research and Development Specialist, Rural Education Program,
Northwest Regional Educational Laboratory

Education

B.S.	St. Olaf College
M.A.	Colorado State College
Ed.D.	Colorado State College

Experience

Teacher
Research Assistant
Assistant Professor of Education - Descriptive Statistics
Director, Bureau of Education Research and Services
Director, School District Research
Lecturer

Numerous publications resulting from school district
surveys

Consultant in instructional systems development and
installation

Member of the Advisory Panel, ERIC Clearinghouse, Rural
Education and Small Schools

VITA

DR. RAY E. JONGEWARD

Research and Development Specialist, Rural Schools Program,
Northwest Regional Educational Laboratory

Education

B.A. Central Washington State College
M.A. University of Michigan
Ed.D. Washington State University

Postdoctoral studies, Stanford University and Portland
(Oregon) State University

Experience

Teacher
School Principal
Director of Instruction and Curriculum
Coordinator of a School District Research Program
Director of Research, Washington State Department of Education
Director of Research and Evaluation, Northwest Regional
Educational Laboratory
Director of Special Projects, Northwest Regional Educational
Laboratory
Instructor, University of Portland

Author of numerous research studies including the areas of
instructional improvement and the modernization of
school buildings

Consultant to numerous agencies in several states concerning
research and evaluation techniques, cooperative
curriculum development, and development of a change
process model

VITA

DR. PHILIP G. KAPFER

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

B.A. University of Northern Iowa
M.A. University of Northern Iowa
Ph.D. Ohio State University

Experience

Teacher, Kansas
Teaching Assistant, Ohio
Teacher, Nevada
Curriculum and Research Consultant, Nevada
Curriculum Consultant (half time), I/D/E/A
Research and Dissemination Specialist, Nevada
Visiting Associate Professor, University of Utah,
Bureau of Educational Research

Author of books and numerous articles on
individualized curricular and instruction

Consultant to I/D/E/A, numerous Universities and
Public Schools and Districts, Western States Small
Schools Project

Member, Association for Supervision of Curricular
Development National Science Teachers' Association
Phi Delta Kappa, American Educational Research
Association National Education Association

VITA

MR. MELVIN K. KREBS

Designer-Illustrator, Rural Education Program, Northwest
Regional Educational Laboratory

Education

Professional Diploma Portland Museum Art School

Experience

Design Consultant
Production Artist
Art Director

VITA

DR. EDWARD O. MOE

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

Ph.D. Cornell University
B.S. Brigham Young University

Experience

Consultant, Office of Urban Community Development,
Panama
Consultant, Community Development in Indian and Eskimo
Villages
Director, Community Development and Rural Services
Professor of Rural Sociology
Professor of Sociology

Author of numerous articles and papers on Community
Development and Leadership Training

Member of the Board, Model Cities, Salt Lake County, Utah
Member of Panel, Integrated Career Development Project,
Western States Small Schools Project

VITA

DR. RICHARD A. SCHMUCK

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

B.A. University of Michigan
M.A. University of Michigan
Ph.D. University of Michigan
Post Ph.D. National Training Laboratories

Experience

Research Associate, Center for the Advanced Study of
Educational Administration (CASEA)
Working in the Program of Strategies
for Organization Change

Professor of Psychology, University of Michigan
Associate Professor of Education Psychology, Tampa University

Author of numerous books, articles and papers on
organization training, education, group theory and
research

Consultant to numerous School Districts, Industrial
Organizations, Churches and Voluntary Associations

Fellow, National Training Laboratory
Member, American Psychological Association
Member, American Sociology Association

VITA

MR. ROWAN C. STUTZ

Director, Rural Education Program, Northwest Regional
Educational Laboratory

Education

B.S.	Brigham Young University
M.S.	Brigham Young University

Experience

Teacher
Principal
Director, Laboratory School
Superintendent of Schools
Coordinator - Western States Small Schools
Director - Division of Research and Innovation

Author of two brochures on planned management information
services for State Education Agencies

Authored chapters in Emerging State Responsibilities
for Education

Designed a master plan for Utah State Education Agency

VITA

DR. JOHN WILLIAMSON

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

B.A. Duke University
M.A.T. Harvard Graduate School of Education
Ed.D. Harvard Graduate School of Education

Experience

Teacher
Assistant Director of Student Teaching
Coordinator of Development, Portland Public
Schools Experimental Schools Program
Assistant Research Professor, Teaching Research Center
Acting Program Director, Learning Ecologies Program,
Assistant Research Professor, Teaching Research
Division, Oregon State System of Higher Education
Assistant Principal for Planning and Evaluation, Crescent
Valley High School, Corvallis, Oregon

VITA

DR. ASAHEL D. WOODRUFF

Consultant, Rural Education Program, Northwest Regional Educational
Laboratory

Education

Ph.D. University of Chicago
M.S. Brigham Young University

Experience

Professor of Educational Psychology, University of Utah
Director of Bureau of Education Psychology, Cornell University
Dean, College of Education, University of Utah
Human Resources Research Office, George Washington University

Author of: The Psychology of Teaching, New York,
Longmans, Green & Co. 1951
Basic Concepts of Teaching, San Francisco,
Chandler Publishing Co. 1961
A Teaching Behavior Code, M-Step Monograph No.3
Teacher Education in Transition M-Step
Monograph No.6

Fiscal Requirements

The fiscal requirement for this five-year work plan is presented in two parts: (1) the proposed budget for the Components I, II, III, & IV. (2) the proposed optional addition budget for Component V.

PROPOSED BUDGET

Program code: R36N-00f Institution code: R36N Date: April 1, 1972
 Program title: Rural Education Program Institution name: Northwest Regional Educational Laboratory

Estimated cost of Program and Components, by fiscal year and source of funds

Program, Component and source of funds	Total	FY '73	FY '74	FY '75	FY '76	FY '77
Program (without options)						
Total.....	4,928,158	872,347	1,069,511	1,099,236	1,068,326	818,738
DRDR.....	4,678,158	822,347	1,019,511	1,049,236	1,018,326	768,738
Direct Program and Program support	3,852,289	632,446	846,067	870,735	845,084	637,957
Center Management						
Indirect.....(20.5%)	795,869	139,901	173,444	178,501	173,242	130,781
Other Funds, total.....	250,000	50,000	50,000	50,000	50,000	50,000
Other Federal.....						
Non-Federal.....	250,000	50,000	50,000	50,000	50,000	50,000
Components						
Component 1. The Community-Centered						
RFD Strategies						
DRDR Program and Program support.	1,075,443	216,858	210,832	220,186	234,689	192,893
DRDR Other.....	250,000	50,000	50,000	50,000	50,000	50,000
Non-DRDR.....						

Program, Component and source of funds	Total	FY '73	FY '74	FY '75	FY '76	FY '77
Component II. School-Centered RFD Strategy						
DRDR Program and Program support.	760,243	129,828	143,734	157,096	152,472	177,113
DRDR Other.....						
Non-DRDR.....						
Component III. Learner-Centered RFD Strategies						
DRDR Program and Program support.	1,817,200	335,760	429,196	441,484	406,022	204,738
DRDR Other.....						
Non-DRDR.....						
Component IV. Support Agency-Centered RFD Strategy						
DRDR Program and Program support.	229,398	- 0 -	62,305	51,969	51,901	63,223
DRDR Other.....						
Non-DRDR.....						

PROPOSED OPTIONAL ADDITION

Program, Component and source of funds	Total	FY '73	FY '74	FY '75	FY '76	FY '77
Component V. Family-Centered RFD Strategy						
Total....	180,750	42,175	78,325	48,200	12,050	- 0 -
DRDR Program and Program support	150,000	35,000	65,000	40,000	10,000	- 0 -
DRDR Other						
Non-DRDR						
Indirect(20.5%)	30,750	7,175	13,325	8,200	2,050	- 0 -

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- Northwest Regional Educational Laboratory, Rural Schools Program. Personal Conference with Edward O. Moe, December 17, 1971.
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 Utah, June, 1971. (Mimeographed)
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 Program." University of Utah, May 25, 1971. (Mimeographed)
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 Factors Related to the Training of Researchers, Developers,
 Diffusers, and Evaluators in Education. Final Report of Task
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 Research Related Personnel. Final report of the Task Force on
 Research Training (AERA) Washington, D.C.: Government Printing
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 for the National Conference on Problems of Rural Youth. Stillwater,
 Oklahoma, September, 1963.

PART THREE: INSTITUTION DESCRIPTION

I. MISSION AND PROGRAM POLICY

Mission

The basic mission of the Northwest Regional Educational Laboratory is to improve educational processes by: (1) developing educational products and procedures based on scientific knowledge and technology and (2) assisting institutions, organizations and agencies in installing and using effective new products and procedures.

The Laboratory has demonstrated an increasing capability to perform this mission since the inception of the institution in 1966. Response to changes in local, state, regional and national needs and priorities, product and service orientations, levels of funding and other influences has led to a flexible and dynamic institution.

The mission statement reflects the dedication of the Laboratory both to meet present needs and to shape future directions of education. In meeting current needs, the Laboratory draws on the results of research and new technology to develop educational products. Looking to the future, the Laboratory utilizes modern tools to formulate conceptions of what education should become.

Throughout the activities of the Laboratory runs the constant awareness of the necessity for relationships with all levels of educational institutions and agencies. Only a cooperative effort will maintain the flexibility and dynamism which, together with dedication, will bring about the changes necessary to improve education.

Program Policy

Program policy consistent with the basic mission of the Laboratory is established by the Board of Directors. In December 1971 the Board took the following action: "Four programs--Teacher Competencies, Intercultural

Reading and Language Development, Rural Education and Computer Technology--should be prepared according to the guidelines for submittal to the Division of Research and Development Resources. Two additional programs--Vocational/Technical Materials Program and Career Education Program--should prepare program plans for submittal to DRDR or at a later time to other sources."

Suggestions for program development originate from many sources, including the Board of Directors, staff members, advisory committees, membership and educators in the region.

Considerable staff work goes into screening and analysis of suggestions prior to the submittal of recommendations by the Executive Director to the Board. The criteria used by staff members in making program recommendations to the Executive Director are presented in the following table.

Development activities increasingly have become oriented to national needs while maintaining close ties with institutions in its region. By focusing on both regional and national needs, the Laboratory has developed a clearer perception of both concerns.

CRITERIA FOR SELECTING DEVELOPMENTAL ACTIVITIES

I. It is Worthy of Effort

Educational Needs	It is associated with a significant educational problem or issue
Timeliness	It is recognized as a need by a substantial group
Social Importance	It will be helpful to the general or a neglected group
Uniqueness	Unmet or inadequately met by existing efforts

II. It Fits the Mission of the Laboratory

Educational Practice	The educational product can substantially improve educational practice / or
Educational Programs	The product can improve the educational programs to which the effort addresses itself
Availability to User	The product can be made available to users through institutions, organizations and agencies

III. It is Feasible

Solvability	It is a problem which has a potential for solution
Data Base	Educational research data and technology exist upon which to base development of a product
Packageability	A product can be packaged in a usable form
Articulation	The product can be integrated into the present-day educational setting
Cost	The product can be acquired at a cost within the economic reach of the potential users
Distributable	There is a potential for dissemination and installation of the product
Time	The product can be developed within a reasonable time limit (1 to 3 years)

IV. It Is Within the Capability of NWREL

Organization	The Laboratory is or can be organized to handle such an activity efficiently
Staffing	Staff exists within the Laboratory or can be obtained to work expertly on the development of the product
Fundability	The activity has potential for funding by an identifiable source

II. GOVERNANCE, ORGANIZATION AND PERSONNEL

Governance

The Laboratory is organized as a nonprofit organization. The Board of Directors establishes policies and selects the chief administrative officer, the Executive Director.

The membership of the Laboratory is made up of institutions and agencies in the States of Alaska, Idaho, Montana, Oregon and Washington. Recent Board actions have added American Samoa, Guam and Hawaii. The membership groups by state are shown in the table on the following page.

Membership in the Laboratory is secured by a resolution from the governing board of the institution seeking membership and acceptance by the Laboratory Board of Directors. Institutions are eligible from states and territories where the State Board of Education has become a member.

The Board of Directors consist of:

The chief state school officer from each member state and territory (8)

Member institutions from each of the five original member states elect two board members (10)

These directors appoint additional directors to ensure and maintain a balance of representatives from various interest groups (9)

LABORATORY MEMBERS IN STATES AND TERRITORIES^a

TYPE OF INSTITUTION	Alaska	Idaho	Montana	Oregon	Washington	American Samoa	Guam	Hawaii	Totals
State Departments of Education	1	1	1	1	1	1	1	1	8
Schools and Districts	26	80	78	118	159	-	-	-	461
Private/Parochial Schools	7	2	5	7	8	-	-	-	29
Intermediate/County Schools	-	-	8	17	14	-	-	-	39
Colleges/Universities	6	5	7	29	26	-	-	-	73
Professional Associations	7	6	2	64	55	-	-	-	134
Cultural Agencies	1	-	2	5	4	-	-	-	12
Business/Industry	-	-	1	4	7	-	-	-	12
Others	4	4	4	33	10	-	-	-	55
TOTALS	52	98	108	278	284	1	1	1	823

a) As of April 1, 1972

Members of the Board as of April 1, 1972 are:

Shiro Amioka	Hawaii State Superintendent of Education
George Brain (chairman)	Dean of Education, Washington State University
Louis Bruno	Washington State Superintendent of Public Instruction
Dolores Colburg	Montana State Superintendent of Public Instruction
Milton deMello	Director of Education, Government of American Samoa
Rulon Ellis	Superintendent, Pocatello (Idaho) School District
Del Engelking	Idaho State Superintendent of Public Instruction
Kenneth Erickson	Director, Bureau of Educational Research and Service, University of Oregon
Hazel Hays	Coordinator of Community Services and Citizens Participation, Portland Development Comm.
Leslie Hiatt	Teacher, Ketchikan Gateway (Alaska) Borough Schools
Harlan Irwin	Teacher, Moses Lake (Washington) School District
William Lewis	Director of Secondary Education, Alaska Methodist University
Marshall Lind	Alaska Commissioner of Education
Irvin Luiten	Oregon Manager of Public Affairs, Weyerhaeuser Company
John McCoy	Superintendent of Education, Diocese of Helena
Lloyd Milhollen	Superintendent, Lake Oswego (Oregon) School District
Walter Moffett	Pastor, Kooskia First and Kamiah Community Churches (Idaho)
Dale Parnell	Oregon State Superintendent of Public Instruction
Ben Pease	Director, Columbia Basin Civilian Conversation Center
Franklin Quitugua	Director of Education, Government of Guam
Charles Ray	Head of the Department of Education, University of Alaska
William Serrette	Assistant Superintendent, Billings (Montana) School District
Philip Swain	Director of Management and Development, Boeing Company
Robert Van Houte	Executive Secretary, Alaska Education Assn.
Harold Wenaas	Superintendent, Great Falls (Montana) School District
Richard Willey	Dean of Education, Idaho State University
Robert Woodroof	Superintendent, Aberdeen (Washington) School District

Organization and Administration

The Laboratory is organized to conduct planned programmatic research and development work, as shown on the following chart.

All programs and projects of the Laboratory are conducted under performance contracts with federal, state and local agencies. The programs and projects are organized into three divisions: (1) Division of Instructional Systems Development, (2) Division of Career Education Programs and (3) Division of Technical Assistance Programs. Each program and project is accountable for the performance of the contract work statements, including all necessary functions of research, development and dissemination.

Three units comprise the general and administrative structure of the Laboratory: (1) a Division of Planning and Technical Services, (2) an Office of Institutional Communications and (3) a Division of Operations. These units are designed to provide long-range planning and institutional development, to provide essential support services, and to ensure the quality of the performance according to accepted standards and procedures.

Personnel

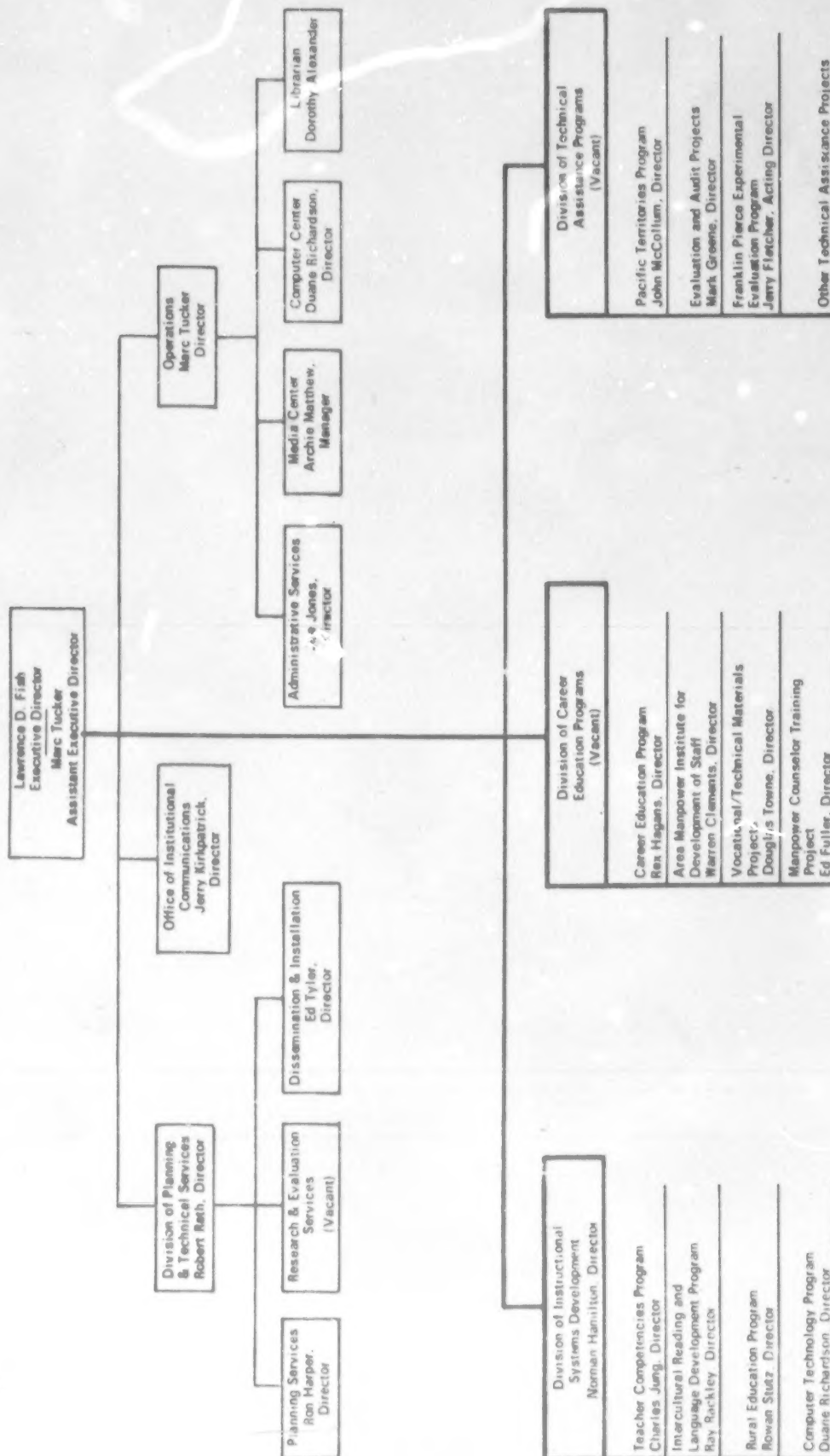
The Laboratory maintains a highly skilled staff in the areas of research, development and dissemination. These individuals have freedom and responsibility to conceptualize and carry out significant development and research programs focused on critical educational problems.

Approximately half of the 150 full-time Laboratory staff members hold professional positions. The remainder provide support, technical and clerical assistance.

NORTHWEST REGIONAL EDUCATIONAL LABORATORY

ORGANIZATIONAL CHART

JANUARY, 1972



The professional staff provides a combination of varied training and experiences for planning and implementing Laboratory programs. Degrees and major areas of concentration for the highest degree held by each professional staff member are indicated in the following list.

Warren Adams - B.A., M.Ed., Ed.D. - Administration
Winston Addis - B.A., M.A., Ph.D. - Educational Administration
Dorothy Alexander - B.S. M.Libr. - Librarianship
LaValle Allen - A.A. - Voc. Ed. and Supervision
Alfred Aragon - A.A., B.A. - Counseling and Psychology
Alma Bingham - A.B., M.A., Ed.D. - Teacher Education
Roger Bishop - B.A. - Education
Amy Breitenbucher - B.S., M.A. - English
Sue Buel - B.S., M.Ed. - Supervision and English
Jean Butman - B.A., Ph.D. - Sociology and Psychology
Warren Clements - B.S. - Elementary/Secondary Education
John Colosimo - A.A., B.S., M.S. - Manpower Administration
Alice Crouch - B.A. - Political Science
Carl Deiz - B.A. - Business Administration
Frank Doyel - B.S., M.Ed., D.Ed. - Education Administration and Research
Judy Edwards - B.S. - Computer Science
Antoinette Ellis - B.A. - Philosophy
Ruth Emory - A.A., B.A., M.A. - Theology
Ralph Farrow - B.S., M.A., Ed.D. - Teacher Education
Lawrence Fish - A.B., M.Ed., Ed.D. - Curriculum and Psychology
Joel Fleming - B.A., M.A. - Communication Arts
Jerry Fletcher - A.B., M.A.T., Ed.D. - Social Studies Education
Cliff Freeman - B.S. - Economics
Ed Fuller - M.S., Ed., Ph.D. - Counseling Psychology
Joan Goforth - B.A. - Political Science
Robert Gourley - Ed.D. - Educational Administration
Mark Greene - B.S., M.S., Ph.D. - Psychology
Rex Hagans - B.A., M.Ed., Ph.D. - Educational Administration
Norman Hamilton - B.S., M.A., Ed.D. - Curriculum and General Administration
Ronald Harper - A.B., M.A., Ed.D. - Administration
Virgie Harris - B.E., M.E. - Counseling and Guidance Education
Chester Hausken - B.A., M.A., Ed.D. - Secondary Education
Ray Horn - B.Sc. - Social Science Education
Joe Jones - A.A., A.B., M.B.A. - Business Accounting
Ray Jongeward - B.A., M.A., Ed.D. - Curriculum and Administration
Charles Jung - B.S., M.S., Ph.D. - Education and Psychology
Jerry Kirkpatrick - B.A., M.A. - Journalism
Karen Lee - A.B. - English Literature
Dick Lynch - B.S. - Chemistry
Robert Lutz - B.S., M.E. - Education
Larry McClure - B.A., Ed.M., Ph.D. - General Education Administration
John McCollum - B.S., M.Ed., Ed.D. - Curriculum
Archie Matthew - B.A., B.Ed. - Physics, Sociology, Audio Visual
Sharon Milczarek - B.A., English Education
Alan Miller - M.A. - Divinity
Barbara Mills - B.A. - English

Leo Myers - B.S., M.Ed., D.Ed. - Educational Administration
 Steve Nelson - A.A., B.A. - Sociology
 Fred Newton - M.Ed. - Educational Administration
 Barry Noonan - B.A., M.A. - Psychology
 Michael Northam - B.A. - Computer Science
 Saralie Northam - B.S. - Communication
 Rene Pino - B.S., M.A. - Business Education
 Claudia Powers - B.S. - Social Science
 Ray Rackley - B.A., M.S., Ph.D. - Linguistics, Lang. Development, Exp. Psy.
 Alicia Ramirez - B.A., M.S. - English Language
 Robert Rath - B.S., M.A., Ed.D. - Administration, Curriculum and Research
 James Reetz - None
 Duane Richardson - B.S., M.S., Ph.D. - Educational Administration
 Joe Rubin - B.S., M.S. - Curriculum
 Frank Serrano - B.A., M.A.T. - Sociology, Anthropology
 Alan Stoller - M.A. - Education
 Rowan Stutz - B.S., M.Sc. - Educational Administration
 John Svicarovich - B.S. - English
 Douglas Towne - B.S., Ph.D. - Educational Research
 Marc Tucker - B.A. - Philosophy
 Edward Tyler - B.S., M.Ed. - Educational Administration
 Sydney Wallace - B.A., M.S. - Special Education
 Gloria Williams - B.A. - Education Guidance and Counseling
 Elizabeth Williamson - B.A., M.A.T. - Mathematics
 Clifford Winkler - B.S. - Education
 Kan Yagi - B.S., M.S., Ph.D. - Psychology
 Flora Young - B.S. - Education

III. INSTITUTIONAL FUNCTIONS

Planning Standards

Laboratory procedures for developing educational products have become a highly specific set of stages and events listed on the following page. These stages and events are specifically adapted for each developmental activity of the Laboratory.

Several implications can be drawn from these stages, events and decision points.

1. The development of educational products involves a specified procedure. The relationship of development with research and dissemination is clear.
2. The stages and events provide an improved means for managing and controlling the development of educational products. Costs associated with events and stages can be accounted and reported.
3. There is a consistent framework for presenting the details of work plans including stages, events, decisions, resources, time and outputs.

STAGES OF PRODUCT DEVELOPMENT AND INSTALLATION

Concept Stage

1. Problem Statement
2. Outcomes
3. Product(s) Description
4. Preliminary Screening

Feasibility Stage

5. Knowledge Search
6. Feasibility Analyses
7. Coypright/Patent Search
8. Feasibility Screening

Operational Planning Stage

9. Multiyear Plan (BPP)
10. Operational Year (ABJ)
11. Review of Plans
12. Revised Plans from Negotiations
13. Initiate Operations
14. Development & Management Review
15. Evaluation & Dissemination Review

Exploratory Units and Tests

16. Exploratory Units
17. Exploratory Test
18. Review & Exploratory Test

Prototype & Pilot Test

19. Design of Prototype of Product(s)
20. Prototype of Product(s)
21. Pilot Test
22. Review of Pilot Test

Interim Product & Field Test

23. Design of Interim Product(s)
24. Interim Product(s)
25. Design of Field Test
26. Field Test
27. Review of Field Test

Product & Operational Test

28. Product(s)
29. Operational Test
30. Review of Operational Test
31. Decision to Install

Installation Stage

32. Disseminate Information about Product(s)
33. Demonstrate the Product(s)
34. Select Production, Sales & Distribution Procedures
35. Design Installation Services
36. Review Installation Stages
37. Begin Nationwide Installation

Evaluation Standards

Standards and procedures have been established for the evaluation of all Laboratory procedures and products.

These standards and procedures are established to make explicit the relationships and responsibilities for:

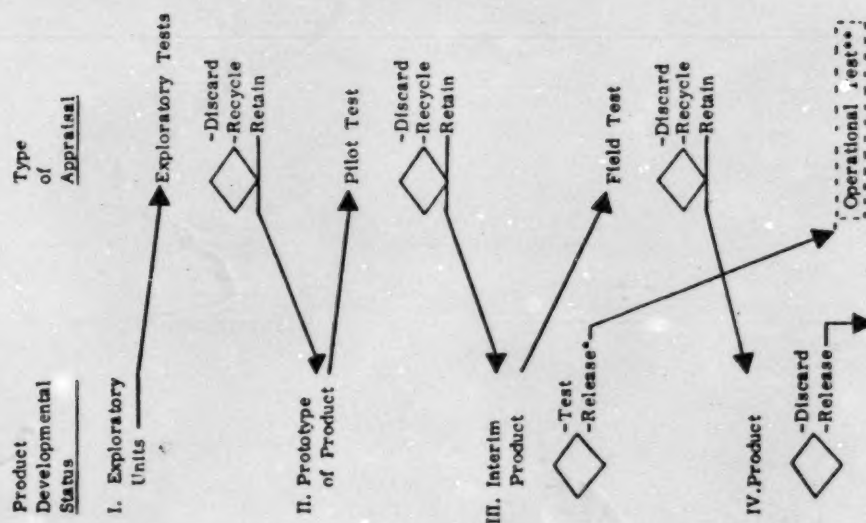
1. Providing the developer with data to determine how well his product works and identifying specific weaknesses and limitations of his product as a basis for possible revision
2. Providing people outside the Laboratory (funding agencies, intended users and professional colleagues) with data to show the quality of products

An evaluation plan must be prepared and approved for each Laboratory component. Implementation of the plan and changes in the evaluation plan must be documented.

The evaluation plans are directly keyed to the stages and events of product development, as shown in the following table. The emphasis, kind of appraisal and questions to be answered change during the iterative process of development.

The Standards and Procedures for Evaluation is a working document available in the Laboratory.

TYPES OF APPRAISAL AND PRODUCT STATUS



Product Developmental Status	Type of Appraisal	Definition of Appraisal	Major Emphasis	Other Questions To Be Asked
I. Exploratory Units	Exploratory Tests	A tryout of parts of the unit with a limited number of potential users under controlled conditions.	Definition of content and determination of feasibility	Replicability
II. Prototype of Product	Pilot Test	An intensive tryout of the product with a limited number of potential users under controlled conditions.	Collection of revision data and analysis of system inputs	Replicability Attainment data
III. Interim Product	-Test -Release*	A systematic testing of the product with a rigorously selected sample from the target group in a realistic setting. Testing and reporting are under direction of R&E Division personnel.	Collection of attainment data and analysis of implementation protocols	Revision data
IV. Product	-Discard -Release	A test of the effectiveness of the completely self-sufficient product with Lab involvement limited to data collection and analysis.	Collection of evidence that product works independently of the Laboratory	Revision data

*Release of an interim product requires evidence that the product achieves objectives with target group.
**This may or may not be required.

Dissemination Standards

The development programs of the Laboratory result in training processes and curriculum materials--the products intended for use in education. To accelerate both the development and utilization of these products, two groups of persons need to be made aware of the Laboratory products and their users: (1) potential users, i.e., teachers and administrators and (2) those who influence or make decisions directly related to education, i.e., State Departments of Education, colleges and universities, congressmen and professional associations.

The Laboratory's Dissemination and Installation Plan provides standards and procedures for carrying out the following functions:

1. Planning--Design a product dissemination program and determine how it will be implemented
2. Analyzing--Determine nature of each product: describe, classify and match with target groups
3. Selecting Strategies--Select activities by which a product will be conveyed to the user
4. Implementing--Design action plan and create widespread utilization of Laboratory products
5. Evaluating--Receive information about dissemination efforts and utilize that information when making decisions concerning future functional operations

Linkage between the developers and practitioners is a basic consideration of program development. Cooperative, collaborative procedures, accompanied by appropriate linkages to the Laboratory, are being developed with agencies in the region to assure that Laboratory products will be available to all people in the region.

IV. RESOURCES AND FISCAL MANAGEMENT

The Laboratory has moved steadily to a multiple resources strategy. At initiation in 1966, all Laboratory work was derived from one contract with the Division of Educational Laboratories in the Office of Education. By the end of 1971, over half of the resources of the Laboratory were derived from some 50 other performance contracts. This multiple funding strategy has allowed the development of additional programs and projects.

The Laboratory has been able to differentiate its performance contracts to improve its programmatic thrusts. Utilizing scarce research and development dollars for development and state and local resources for field testing and dissemination has resulted in an advantageous melding of resources for the improvement of education.

Through multiple funding strategies, the Laboratory also has been able to increase its responsiveness to both national and local needs and priorities. With multiple resources, performance work contracts can be negotiated with the National Center for Educational Research and Development and other branches of the federal government, with State Departments of Education, and with colleges, universities and local school districts. Thus, the research, development and dissemination continuum can be supported as needed by all levels of education.

This combination of resources provides for the following essential characteristics of optimum Laboratory operation.

Development and Research Capabilities. Maintenance of unique capabilities in educational development and research work, including

1. Organization and management of a multifaceted research and development enterprise
2. Product development according to a set of clearly defined stages and events

3. Evaluation of product development according to a set of standards and procedures
4. Dissemination standards and procedures resulting in effective and efficient installation of products.

Core Staff. Maintenance of core staff and capability for both programmatic and project efforts, including educational improvement through development activities in response to current and projected local, regional and national needs. The core staff must include conceptual planning, development, evaluation and dissemination capabilities generic to programmatic efforts.

Institutional Relationships. Sufficient independence to establish linkage relationships with local, state, regional and national agencies engaged in the research, development, dissemination and/or operation of educational enterprises. Such relationships are essential for concerted, cooperative ventures through consortia, as well as for synergism and multiplier effects within efforts for improvement of educational systems.

Core Programmatic Effort. Programmatic efforts projected over a span of time with sufficient breadth and depth to produce significant outcomes in specified populations under specified conditions, as well as produce significant changes in output indices. Multiyear programmatic efforts require a core program staff for self-renewing, updating and revising of the program based upon impact and effectiveness evaluations. In addition, short-range, high burst units of work, such as projects, are essential to the multiyear program.

State and Local, Public and Private Support. Project activities such as service contracts, training of trainers, installation activities, local adaptations and feasibility studies to assist programmatic development, testing and evaluation, and installation.

The Laboratory's management accounting system is designed to provide proper safeguards over funds entrusted to the Laboratory.

Directors of the various programs within the Laboratory are provided with current information on the financial status of programs under their administration. This information permits them to properly allocate the funds provided by contracts in accordance with the way the programs were planned and budgeted.

A time accounting system makes it possible for particular abilities of individual staff members to be utilized in a variety of programs as they are needed, while still maintaining fiscal responsibility and accountability to individual grantors.

In addition, reports generated furnish officers of the Laboratory with the fiscal information necessary to assist in making management decisions.

V. PRODUCTS AND IMPACT

The following table lists products completed and underdevelopment in programs currently supported by the Laboratory's basic contract with the USOE Division of Research and Development Resources.

Instructional Systems Being Developed

Components

Products

1971 Activity

IMPROVING TEACHING COMPETENCIES PROGRAM

Pupil-Teacher Interaction

Facilitating Inquiry in the Classroom (instructional program for teachers)

The completed system was used by colleges and schools to conduct 46 workshops and courses for 1,213 teachers

Interaction Analysis (instructional program for teachers)

The completed system was used by colleges and schools to conduct 28 workshops and courses for 825 teachers

Development of Higher Level Thinking Abilities (instructional program for teachers)

Final editing of the system was completed during the year and it was used by colleges and schools to conduct 44 workshops and courses for 1,426 teachers

Teaching Responsively for Individualized Meaning (TRIM) (instructional program for teachers)

Development work over the past two years culminated in initiation of a field trial of the prototype system

Objective Analysis and Planned Change

Systematic and Objective Analysis of Instruction (instructional program for school personnel)

The completed system was used by colleges and schools to conduct 16 courses and workshops for 456 school personnel

Research Utilizing Problem Solving (RUPS)	The completed classroom version of the system was used by colleges and schools to conduct 32 courses and workshops for 973 teachers; an administrators' version was completed; a prototype of the advisory committee version was tested and revised
Systems Technology (instructional program for school personnel)	The prototype system was revised and tested in a field trial
Interpersonal Relations	Development of the system was completed; it was used by colleges and schools to conduct 52 workshops and courses for 2,029 school personnel
Interpersonal Influence (instructional program for school personnel)	The prototype system was readied for the first field trial
Preparing Education Training Consultants	The final field test of the prototype system was completed and it is being readied for general use
Consultation Skills (PETC II)	Three field trials of the prototype system were conducted
Organizational Development Skills (PETC III)	The prototype system was readied for its first trial
Teaching for Affective Growth Education to Support the Growth of Human Potential	Planning of products in two new components began

INTERCULTURAL READING AND LANGUAGE DEVELOPMENT PROGRAM

Alaskan Reading and Language Development

Alaskan Readers (12 levels of workbooks, storybooks and teachers' manuals)

Revision of the first 8 levels was completed simultaneously with field testing; use of the Readers was expanded to virtually all villages in Alaska

Teacher Training Package

Supplementary Materials

Curriculum Materials for Disadvantaged Children and Youth

Improving Motor-Perceptual Skills (teacher's guide)

Schools and other institutions ordered 4,589 copies of the guide during the first 16 months it was available

Coordinated Helps in Language Development (teacher's guide)

Schools and other institutions ordered 2,508 copies of the guide during the first 13 months it was available

RURAL EDUCATION PROGRAM

Self-Instructional Systems

Basic Electricity

The completed system was made available to schools through Audiscan, Inc.

Welding I and II

The systems were prepared for publication

Plastics

Speech

Math Analysis

The prototype system was readied for the first field test

Art (K-3)	The exploratory unit was designed and reached for field trial
Art (4-6)	Planning began
Community Oriented Change Process	Prototype materials and procedures were prepared and given a field trial in 3 communities
Life Internship Units	Planning of products in two new components began

Teachers' Facilitating Behavior

COMPUTER TECHNOLOGY PROGRAM

REACT for School Administrators

REACT for Teachers

REACT for Students

CUES/REACT
(instructional units)

Student Training Package

Development of the materials and training was completed and arrangements made to make them available to all schools and colleges through Technica Education Corporation

Design and development of materials began